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OF THE

NAVY DEPARTMENT

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FOR

THE YEAR 1902.

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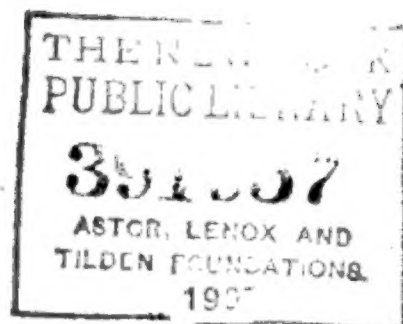
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REPORT OF THE
SECRETARY OF THE NAVY.
MISCELLANEOUS REPORTS.

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REPORT

OF THE

SECRETARY OF THE NAVY.

NAVY DEPARTMENT,
Washington, November 19, 1902.

The PRESIDENT:

SIR: During a large part of the fiscal year the administration of this Department was conducted by Hon. John D. Long, whom I succeeded on May 1, 1902.

A statement of the operations of the fleet reveals an activity characteristic of all branches of the naval service of to-day. Such a statement may be found in the report of the Chief of the Bureau of Navigation, and will not be repeated in this report. The cooperation of the Army and Navy has everywhere been cordial. The Navy has done its share in restoring order in the Philippines. The conditions throughout the islands have so far improved that the constant presence of a large naval force is no longer necessary. Five gunboats have been put out of commission or laid up for repairs.

The disturbed conditions in the West Indies and Caribbean have required the constant presence of our ships charged with the duties of maintaining order by moral influence, protecting the interests of our citizens and those of other nations committed to us, and of preserving the treaty rights of the Government. These duties have been performed in harmonious cooperation with the Department of State.

The Navy rendered essential aid in the relief furnished to the inhabitants of the islands of Martinique and St. Vincent afflicted by the volcanic eruption occurring in May last.

Ocean surveys have been continued to the extent which the number of available officers, men, and ships would permit.

The Navy participated in many ceremonial occasions, one of which is so significant and memorable that it merits a special description. In May, 1902, the U. S. S. *Brooklyn* was ordered to proceed to Habana, Cuba, to be in attendance at the ceremonies of the transfer of the authority of the United States in that island to the Cuban Government. On the day of the transfer, May 20, 1902, the *Brooklyn* dressed ship,

and at noon, when the American ensign was lowered on the Morro, a national salute was fired, marine guard paraded, the ship's company manned the rail, and the band played the national air, a Cuban flag being immediately hoisted and saluted in a similar manner. The foreign ships in the port of Havana followed the movements of the *Brooklyn*. Shortly after the transfer of the Government was effected, Brig. Gen. Leonard Wood, U. S. Army, who had been governor-general of the island, came on board the *Brooklyn*, and was received with full honors due the position of governor-general. A salute of 17 guns was fired by the *Brooklyn*, as well as by the British cruiser *Psyche* and the Italian cruiser *Calabria*. These last salutes were returned by the *Brooklyn*. At 3.30 in the afternoon the *Brooklyn* proceeded to sea, to convey General Wood and his staff to a United States port.

The task which is employing the highest energies of the Navy, and receiving the greatest attention from the heads of bureaus, the commanders in chief of stations, the commanding and subordinate officers of squadrons, divisions, and single vessels everywhere, is the work of training. To the development of the greatest efficiency in all branches of the service the attention, zeal, and thought of those in charge is mainly directed. This is an era of training. The reports of the several bureaus are largely made up of criticisms upon and plans for the improvement of present systems of practice, drill, and instructions.

The training of apprentice boys and landsmen entering for the first time the enlisted force of the Navy in all that is comprehended by the term "the sea habit;" the training of seamen who have acquired this, but need greater familiarity with the specialized work of a modern ship of war; the training of officers and men of the Marine Corps in the military and naval duties of that organization; the training of officers and men, sailors and marines in the essential matter of marksmanship with all arms, great and small, including machine and rapid-fire guns, in the care and handling of ordnance, and, particularly, in "gun pointing;" training in developing and maintaining the efficiency of the main engines of ships, as well as of all auxiliary machinery and devices, steam, electrical, and other; the training of young officers of the staff corps in the specialties of their profession, as well as in its general obligations and duties; the training of junior officers in torpedo work of all kinds, and in the handling of the smaller vessels, and the training of more experienced officers in the capacity to bring out and utilize the full powers of the vessels under their command, whether operating singly or in squadrons, appears to be the important present business of the Navy.

For these purposes schools of instruction have been established wherever practicable, among them being the school for petty officers of the seaman branch at Newport, and for the artificer branch at the navy yards, Portsmouth, Va., and New York; the school at the

Medical Museum, and the torpedo school at Newport. At the same time the work of the Naval War College has received increased attention.

It is needless to say that the purpose of all this instruction and training is to make the Navy fit for its ultimate design as an instrument of warfare. The Navy serves many useful purposes in times of peace which should by no means be minimized. Nevertheless it would not exist in anything like its present form if the possibility of war were not in contemplation. It is believed to be the duty of the Department to employ the means which Congress has placed at its disposal to develop every latent power of materiel and personnel and see that all branches of the service operate in intelligent harmony. This constitutes that preparedness for war which is the best guaranty of the continuance of peace. It has been remembered at every step that the people desire peace and not war, and that the Navy should be potent that peace may be preserved. This preparedness for war should be complete; a partial or half-way preparation will not insure us against attack, may even invite it.

VESSELS UNDER CONSTRUCTION.

At the close of the last fiscal year there were under construction for the Navy, by contract, the following vessels: Eight battle ships, 6 armored cruisers, 9 protected cruisers, 4 monitors, 13 torpedo-boat destroyers, 7 torpedo boats, and 7 submarine torpedo boats. The general progress of work upon these vessels, particularly those of the larger class, has not been found to be satisfactory. The battle ships were, on the 30th of June, 1902, from 10 to 29 months behind contract time; the armored cruisers from 4 to 13 months; the protected cruisers from 6 to 18 months, while the monitors were from 16 to 19 months in arrears.

In the cases of the larger vessels the causes assigned for slow progress are the nondelivery of structural material, the inability of ship-builders to obtain a sufficient supply of skilled labor, and in some cases, strikes. Other causes have contributed to the result. The Department has recently taken steps to remove, as far as practicable, any grounds of delay over which it can exercise control, and has notified contractors that they will be held to accountability for failure to push forward the work of construction with due diligence, if such failure shall occur, and particularly for any delays which may at any time be caused by preference being given to private over public work.

In the case of torpedo boats and the destroyers, the contractors have assigned as an additional reason for delay that the contracts for their construction were so exacting that compliance with them has been well nigh impossible.

During the fiscal year the following vessels have been finally accepted: The battleships *Alabama*, *Wisconsin*, and *Illinois*; the torpedo boats *Bailey*, *Bagley*, *Barney*, *Biddle*, *Shubrick*, and *Stockton*. The torpedo boats *Thornton* and *Wilkes*, and the destroyers *Decatur*, *Perry*, and *Preble* have been preliminarily accepted. Between July 1, 1902, and November 1, 1902, the *Thornton* has been finally, and the following vessels preliminarily, accepted: The monitor *Arkansas*, the torpedo-boat destroyers *Barry*, *Chauncey*, *Dale*, *Paul Jones*, *Truxton*, *Whipple*, and *Worden*, and the torpedo boat *De Long*.

The monitors *Catskill*, *Manhattan*, and *Mahopac* and the receiving ship *Vermont* have been stricken from the Navy Register during the fiscal year. These vessels, condemned as unfit for further service under the provisions of the law, were advertised and sold as follows: The *Catskill*, single-turreted monitor, appraised value, \$6,160, was sold December 4, 1901, to L. E. Lunt, Melrose, Mass., for \$11,788; the *Manhattan*, single-turreted monitor, appraised value, \$8,736, was sold March 5, 1902, to Henry A. Hitner's Sons, Philadelphia, Pa., for \$15,218; the *Mahopac*, single-turreted monitor, appraised at \$8,516, was sold March 5, 1902, to A. V. Kaiser & Co., Philadelphia, Pa., for \$15,218. The U. S. S. *Vermont* was twice advertised for sale. Under the first advertisement no bids were received above the appraised value of the vessel (\$18,000). A reappraisalment was made at \$14,000, and, under a second advertisement, the *Vermont* was sold on April 15, 1902, to L. E. Lunt, of Melrose, Mass., for \$15,658.

There follows a list of the vessels on the Navy Register at the close of the fiscal year.

List of ships of the United States Navy.

[ABBREVIATIONS.—Hull: S., steel; S. W., steel, wood sheathed; I, iron; W., wood. Propulsion: S., screw; T. S., twin screw; Tr. S., triple screw; P., paddle.]

FIRST RATE.

Name.	Displacement (tons).	Type.	Hull.	I. H. P.	Propulsion.	Guns (main battery).	Station or condition.
Alabama	11,525	First-class battle ship.	S.	11,366	T. S.	18	North Atlantic Station.
Illinois	11,525	do	S.	11,366	T. S.	18	European Station.
Wisconsin	11,525	do	S.	10,000	T. S.	18	Pacific Station.
Kearsarge	11,525	do	S.	11,954	T. S.	22	North Atlantic Station.
Kentucky	11,525	do	S.	12,318	T. S.	22	Asiatic Station.
Iowa	11,340	do	S.	12,105	T. S.	18	South Atlantic Station.
Indiana	10,288	do	S.	9,738	T. S.	16	Cadet practice ship (Naval Academy).
Massachusetts	10,288	do	S.	10,403	T. S.	16	North Atlantic Station.
Oregon	10,288	do	S.	11,111	T. S.	16	Repairing, navy-yard, Pu- get Sound.
Brooklyn	9,215	Armored cruiser	S.	18,769	T. S.	20	North Atlantic Station.
New York	8,200	do	S.	17,401	T. S.	18	Asiatic Station.

List of ships of the United States Navy—Continued.

SECOND RATE.

Name.	Displacement (tons).	Type.	Hull.	I. H. P.	Propulsion.	Guns (main battery).	Station or condition.
Columbia.....	7,375	Protected cruiser	S.	18,509	Tr. S.	11	Receivingship, navy-yard, New York, N. Y.
Minneapolis.....	7,375	do.....	S.	20,862	Tr. S.	11	Receivingship, navy-yard, League Island, Pa.
Texas.....	6,315	Second-class bat- tle ship.	S.	8,610	T. S.	8	Navy-yard, Norfolk.
Puritan.....	6,060	Double-turret monitor.	I.	3,700	T. S.	10	Special service (gunnery training ship).
Olympia.....	5,870	Protected cruiser	S.	17,313	T. S.	14	North Atlantic Station.
Chicago.....	5,000	do.....	S.	9,000	T. S.	18	European Station.
Yankee.....	6,888	Cruiser (con- verted).	I.	3,800	S.	10	Navy-yard, League Island.
Prairie.....	6,872	do.....	I.	3,800	S.	10	Training service (lands- men).
Buffalo.....	6,888	do.....	S.	3,600	S.	6	En route to Manila.
Dixie.....	6,145	do.....	S.	8,800	S.	10	Navy-yard, New York.
Baltimore.....	4,413	Protected cruiser	S.	10,064	T. S.	10	Do.
Philadelphia.....	4,324	do.....	S.	8,815	T. S.	12	Pacific Station.
Newark.....	4,098	do.....	S.	8,869	T. S.	12	Navy-yard, Boston.
San Francisco.....	4,098	do.....	S.	9,913	T. S.	12	European Station.
Monterey.....	4,084	Barbette turret, low free-board monitor.	S.	5,244	T. S.	4	Asiatic Station.

THIRD RATE.

Ajax.....	^a 7,500	Collier.....	S.	3,000	S.	^b 2	Collier service.
Glacier.....	^a 7,000	Refrigerator ship	S.	.....	S.	^b 3	Asiatic Station.
Celtic.....	6,428	Supply ship.....	S.	1,890	S.	.....	Do.
Culgoa.....	^a 6,300	do.....	S.	^a 1,500	.....	.....	Navy-yard, Boston.
Saturn.....	^a 6,220	Collier.....	I.	1,500	S.	^b 2	Asiatic Station.
Rainbow.....	6,206	Cruiser (con- verted).	S.	1,800	S.	.....	Do.
Arethusa.....	^a 6,200	Tank steamer.....	S.	.....	S.	.....	Do.
Alexander.....	6,181	Collier.....	S.	1,026	S.	^b 2	Collier service.
Iris.....	6,100	Supply and re- pair ship.	S.	1,300	S.	.....	Asiatic Station.
Brutus.....	^a 6,000	Collier.....	S.	1,200	S.	^b 2	Collier service.
Sterling.....	5,663	do.....	I.	^a 926	S.	^b 2	Do.
Cæsar.....	5,016	do.....	S.	1,500	S.	^b 4	Do.
Nero.....	4,925	do.....	S.	1,000	S.	^b 4	Do.
Nanshan.....	^a 4,827	do.....	S.	.....	.....	.....	Asiatic Station.
Abarenda.....	4,670	do.....	S.	1,050	S.	^b 4	En route to navy-yard, Norfolk.
Supply.....	4,460	Supply ship.....	I.	1,069	S.	^b 2	Navy-yard, New York.
Marcellus.....	^a 4,400	Repair ship.....	I.	1,200	S.	^b 2	Navy-yard, Norfolk, Va.
Hannibal.....	4,291	Collier.....	S.	1,100	S.	^b 2	Collier service.
Leonidas.....	4,242	do.....	S.	1,000	S.	^b 2	Do.
Solace.....	4,700	Hospital ship.....	S.	3,200	S.	.....	Transport service to Ma- nila.
Panther.....	4,260	Cruiser (con- verted).	I.	.....	S.	8	Navy-yard, New York, N. Y.
Miantonomoh.....	3,990	Double-turret monitor.	I.	1,426	T. S.	4	Navy-yard, League Island, Pa.
Amphitrite.....	3,990	do.....	I.	1,600	T. S.	6	Navy-yard, Boston.
Monadnock.....	3,990	Double-turret monitor.	I.	3,000	T. S.	6	Asiatic Station.
Terror.....	3,990	do.....	I.	1,600	T. S.	4	Naval Academy, Annap- olis, Md.
Albany.....	3,437	Protected cruiser	S. W.	7,500	T. S.	10	European Station.
New Orleans.....	3,437	do.....	S. W.	7,500	T. S.	10	Asiatic Station.
Lancaster.....	3,250	Cruiser.....	W.	1,000	S.	12	Training service (lands- men).
Cincinnati.....	3,213	Protected cruiser	S.	10,000	T. S.	11	Training ship (firemen).
Raleigh.....	3,213	do.....	S.	10,000	T. S.	11	Navy-yard, Portsmouth, N. H.
Reina Mercedes.....	3,090	do.....	S.	3,700	S.	.....	Do.
Atlanta.....	3,000	do.....	S.	4,030	S.	8	South Atlantic Station.
Boston.....	3,000	do.....	S.	4,030	S.	8	Navy-yard, Mare Island.
Hartford.....	2,790	Cruiser.....	W.	2,000	S.	13	Training ship (appren- tices).

^a Estimated.^b Secondary battery.

List of ships of the United States Navy—Continued.

THIRD RATE—Continued.

Name.	Displacement (tons).	Type.	Hull.	I. H. P.	Propulsion.	Guns (main battery).	Station or condition.
Mayflower.....	2,690	Cruiser (con- verted).	S.	4,700	T. S.	2	Special service.
Topeka	2,372	Gunboat.....	I.	2,000	S.	8	Training ship (landsmen).
Katahdin	2,155	Harbor-defense ram.	S.	5,068	T. S.	4	Navy-yard, League Island.
Canonicus.....	2,100	Single-turret monitor.	I.	340	S.	2	Do.
Detroit	2,089	Unprotected cruiser.	S.	5,227	T. S.	10	Navy-yard, Portsmouth, N. H.
Montgomery	2,089	do.....	S.	5,580	T. S.	10	Navy-yard, New York.
Marblehead	2,089	do.....	S.	5,451	T. S.	10	Navy-yard, Mare Island.
Mohican	1,900	Cruiser	W.	1,100	S.	6	Training ship (landsmen).
Jason	1,875	Single-turret monitor.	I.	340	S.	2	Navy-yard, League Island.
Lehigh	1,875	do.....	I.	340	S.	2	Do.
Montauk	1,875	do.....	I.	340	S.	2	Do.
Nahant	1,875	do.....	S.	340	S.	2	Do.
Manila	1,900	Gunboat.....	I.	750	S.	2	Navy-yard, Mare Island.
Bennington	1,710	do.....	I.	3,436	T. S.	6	Do.
Concord	1,710	do.....	S.	3,405	T. S.	6	Do.
Yorktown	1,710	do.....	S.	3,392	T. S.	6	Asiatic Station.
Dolphin	1,486	Dispatch boat...	S.	2,253	S.	3	Special service.
Wilmington	1,392	Light-draft gun- boat.	S.	1,894	T. S.	8	Asiatic Station.
Helena	1,392	do.....	S.	1,988	T. S.	8	Do.
Adams	1,375	Cruiser	W.	800	S.	6	Navy-yard, Mare Island.
Essex	1,375	do.....	W.	800	S.	6	Training ship (appren- tices).
Enterprise.....	1,375	do.....	W.	800	S.	1	Public Marine School, Boston.
Nashville.....	1,371	Light-draft gun- boat.	S.	2,536	T. S.	8	European Station.
Monocacy	1,370	do.....	I.	850	P.	6	Asiatic Station.
Castine	1,177	Gunboat.....	S.	2,199	T. S.	8	Navy-yard, League Island.
Machias	1,177	do.....	S.	2,046	T. S.	8	North Atlantic Station.
Wesapeake	1,175	do.....	Comp.	.....	Sails.	6	Cadet practice ship (Naval Academy).
Don Juan de Aus- tria.....	1,159	do.....	I.	1,500	S.	4	Asiatic Station.
Isla de Luzon....	1,030	do.....	S.	2,627	T. S.	6	Do.
Isla de Cuba.....	1,030	do.....	S.	2,627	T. S.	6	Do.
Alert	1,020	Cruiser	I.	500	S.	3	Training ship (appren- tices).
Ranger	1,020	do.....	I.	500	S.	6	Special service.
Annapolis.....	1,000	Composite gun- boat.	Comp.	1,227	S.	6	Asiatic Station.
Vicksburg	1,000	do.....	Comp.	1,118	S.	6	Do.
Wheeling.....	1,000	do.....	Comp.	1,081	T. S.	6	Station ship, Tutuila.
Marietta.....	1,000	do.....	Comp.	1,054	T. S.	6	North Atlantic Station.
Newport.....	1,000	do.....	Comp.	1,008	S.	6	Training Station, New- port, R. I.
Princeton	1,000	do.....	Comp.	800	S.	6	Asiatic Station.

FOURTH RATE.

Lebanon	3,375	Collier.....	I.	.....	S.	b4	Collier service.
Justin	3,300	do.....	S.	.....	S.	b2	Asiatic Station.
Southery	a3,100	do.....	I.	.....	S.	b2	Prison ship, navy-yard, Boston.
Pompey	a3,085	do.....	S.	.....	S.	b2	Asiatic Station.
Zafiro	a2,000	Supply ship.....	S.	.....	.....	.....	Do.
General Alava....	1,400	Transport.....	S.	770	S.	b4	Do.
Yankton	975	Gunboat (con- verted).	S.	750	S.	b8	Navy-yard, Portsmouth, N. H.
Vesuvius	929	Dynamite-gun vessel.	S.	3,795	T. S.	b3	Navy-yard, Boston.
Petrel	892	Gunboat.....	S.	1,095	S.	4	Navy-yard, Mare Island.
Scorpion	850	Gunboat (con- verted).	S.	2,800	T. S.	b8	North Atlantic Station.
Fern	840	Tender	W.	300	S.	b3	Naval Militia, District of Columbia.

a Estimated.

b Secondary battery.

List of ships of the United States Navy—Continued.

FOURTH RATE—Continued.

Name.	Displacement (tons).	Type.	Hull.	I. H. P.	Propulsion.	Guns (main battery).	Station or condition.
Bancroft	839	Gunboat	S.	1,213	T. S.	4	Navy-yard, Boston.
Vixen	806	Gunboat (con- verted).	S.	1,250	S.	a 4	Navy-yard, Portsmouth, N. H.
Gloucester	786	do	S.	2,000	S.	a 10	Naval Academy, Annapo- lis, Md.
Michigan	685	Cruiser	I.	365	P.	a 6	Special service, North- western Lakes.
Wasp	630	Gunboat (con- verted).	S.	1,800	S.	b 6	Navy-yard, Port Royal, S. C.
Frolic	607	do	S.	550	S.	b 4	Asiatic Station.
Dorothea	594	Gunboat (con- verted).	S.	1,558	S.	b 10	Naval Militia, Illinois.
El Cano	560	Gunboat	S.	600	T. S.	.....	Asiatic Station.
Pinta	550	do	I.	310	S.	b 2	Naval Militia, San Diego Cal.
Stranger	a 546	Gunboat (con- verted).	I.	.....	S.	b 5	Naval Militia, Louisiana.
Peoria	488	do	S.	.....	S.	b 7	Tender to Puritan.
Hist	472	do	S.	500	S.	b 6	Training Station, New- port, R. I.
Eagle	434	do	S.	850	S.	b 6	Navy-yard, Portsmouth.
Hornet	425	do	S.	800	S.	b 9	Naval militia, North Caro- lina.
Quiros	400	Gunboat	Comp.	208	S.	b 2	Asiatic Station.
Villalobos	400	do	Comp.	208	S.	b 2	Do.
Hawk	375	Gunboat (con- verted).	S.	1,000	S.	b 4	Naval Militia, Ohio.
Siren	a 315	do	S.	.....	S.	b 4	Tender to Franklin.
Sylvia	a 302	do	I.	.....	S.	b 6	Naval Militia, Maryland.
Callao	200	Gunboat	S.	250	T. S.	b 6	Asiatic Station.
Pampanga	200	do	I.	250	T. S.	b 4	Do.
Paragua	200	do	I.	250	T. S.	b 4	Do.
Samar	200	do	I.	250	T. S.	b 4	Do.
Arayat	200	do	I.	260	T. S.	b 6	Do.
Aileen	192	Gunboat (con- verted).	S.	500	S.	b 5	Naval Militia, New York.
Mindanao	174	Gunboat	I.	100	T. S.	b 6	Asiatic Station.
Elfrida	a 173	Gunboat (con- verted).	S.	200	S.	b 2	Naval Militia, New Jersey.
Sylph	152	do	S.	550	S.	b 8	Special service.
Calamianes	150	Gunboat	I.	125	T. S.	b 3	Asiatic Station.
Albay	150	do	I.	125	T. S.	b 3	Do.
Leyte	150	do	I.	125	T. S.	b 3	Do.
Oneida	150	Gunboat (con- verted).	W.	350	S.	b 6	Naval Militia, District of Columbia.
Panay	142	Gunboat	I.	125	T. S.	b 4	Asiatic Station.
Manileño	142	do	I.	125	T. S.	b 4	Do.
Mariveles	142	do	I.	125	T. S.	b 4	Do.
Mindoro	142	do	I.	125	T. S.	b 4	Do.
Restless	137	Gunboat (con- verted).	I.	500	S.	b 8	Navy yard, Norfolk.
Shearwater	122	do	S.	.....	S.	b 3	Naval Militia, Pennsylva- nia.
Inca	a 120	do	W.	400	S.	b 2	Naval Militia, Massachu- setts.
Alvarado	100	Gunboat	S.	137	S.	b 2	Naval Academy, Annapo- lis.
Sandoval	100	do	S.	137	S.	b 2	Do.
Huntress	82	Gunboat (con- verted).	Comp.	.....	S.	b 2	Naval Militia, New Jersey.
Basco	42	Gunboat	I.	44	S.	b 2	Asiatic Station.
Garloqui	42	do	I.	44	S.	b 2	Do.
Urdaneta	42	do	I.	44	S.	b 2	Do.

TORPEDO VESSELS.

Decatur	420	Torpedo-boat de- stroyer.	S.	8,000	T. S.	a 2	Torpedo-boat flotilla.
Perry	420	do	S.	7,000	T. S.	a 2	Navy-yard, Mare Island.
Preble	420	do	S.	7,000	T. S.	a 2	Do.

a Secondary battery.

b Estimated.

List of ships of the United States Navy—Continued.

TORPEDO VESSELS—Continued.

Name.	Displacement (tons).	Type.	Hull.	I. H. P.	Propulsion.	Guns (main battery).	Station or condition.
Cushing (No. 1) ..	105	Torpedo boat....	S.	1,720	T.S.	a 3	In reserve, navy-yard, Norfolk.
Ericsson (No. 2) ..	120	do.....	S.	1,800	T.S.	a 3	Do.
Foote (No. 3).....	142	do.....	S.	2,000	T.S.	a 3	Do.
Rodgers (No. 4) ..	142	do.....	S.	2,000	T.S.	a 3	Do.
Winslow (No. 5) ..	142	do.....	S.	2,000	T.S.	a 3	Torpedo Station, New- port, R. I.
Porter (No. 6) ...	165	do.....	S.	b 3,400	T.S.	a 3	In reserve, navy-yard, Norfolk.
Dupont (No. 7) ..	165	do.....	S.	b 3,400	T.S.	a 3	Do.
Rowan (No. 8) ..	182	do.....	S.	3,200	T.S.	a 3	Puget Sound Naval Sta- tion.
Dahlgren (No. 9)	146	do.....	S.	4,200	T.S.	a 2	Torpedo Station, New- port, R. I.
T. A. M. Craven (No. 10) ..	146	do.....	S.	4,200	T.S.	a 2	Do.
Farragut (No. 11)	273	do.....	S.	5,600	T.S.	a 2	Pacific Station.
Davis (No. 12) ...	132	do.....	S.	1,750	T.S.	a 3	Navy-yard, Mare Island.
Fox (No. 13).....	132	do.....	S.	1,750	T.S.	a 3	Do.
Morris (No. 14) ..	105	do.....	S.	1,750	T.S.	a 3	Torpedo Station, New- port, R. I.
Talbot (No. 15) ..	46½	do.....	S.	850	S.	a 2	Naval Academy, Annapo- olis.
Gwin (No. 16) ...	46	do.....	S.	850	S.	a 2	Do.
Mackenzie (No. 17) ..	65	do.....	S.	850	S.	a 2	Navy-yard, New York.
Wilkes (No. 36) ..	165	do.....	S.	3,000	T.S.	c 3	Do.
McKee (No. 18) ..	65	do.....	S.	850	S.	a 2	Torpedo station, Newport, R. I.
Bailey (No. 21) ..	235	do.....	S.	5,600	T.S.	a 2	Navy-yard, Norfolk.
Somers (No. 22) ..	145	do.....	S.	1,900	S.	a 2	In reserve, navy-yard, Norfolk.
Manly (No. 23) ..	b 30	do.....	S.	b 250	S.	a 1	Naval Academy, Annapo- lis.
Bagley (No. 25) ..	167	do.....	S.	4,200	T.S.	a 3	Torpedo boat flotilla.
Barney (No. 26) ..	167	do.....	S.	4,200	T.S.	a 3	Do.
Biddle (No. 27) ..	167	do.....	S.	4,200	T.S.	a 3	Do.
Shubrick (No. 32)	166	do.....	S.	3,000	T.S.	a 3	Do.
Stockton (No. 33)	166	do.....	S.	3,000	T.S.	a 3	Do.
Thornton.....	165	do.....	S.	3,000	T.S.	b 3	Do.
Stiletto (No. 53) ..	31	do.....	W.	359	S.	a 2	Torpedo station, Newport, R. I.
Holland (No. 54) ..	73	Submarine tor- pedo boat.	S.	150	S.	a 1	Naval Academy, Annapo- lis, Md.

TUGS.

Accomac	187	Tug	I.	250	S.	b 2	Navy-yard, Pensacola.
Active.....	296	do.....	S.	600	S.	b 5	Navy-yard, Mare Island
Alice.....	356	do.....	W.	250	S.	b 2	Navy-yard, Norfolk.
Apache.....	650	do.....	W.	550	S.	b 3	Navy-yard, New York.
Chickasaw	100	do.....	I.	.....	S.	b 1	Do.
Choctaw	350	do.....	I.	188	S.	b 3	Navy-yard, Norfolk.
Fortune	450	do.....	I.	340	S.	.....	Navy-yard, Boston.
Hercules	198	do.....	I.	.....	S.	b 3	Navy-yard, Norfolk.
Iroquois.....	702	do.....	S.	1,000	S.	b 3	Naval Station, Hawaii.
Iwana	192	do.....	S.	300	S.	.....	Navy-yard, Boston.
Leyden.....	450	do.....	I.	340	S.	.....	Torpedo Station, Newport, R. I.
Massasoit.....	202	do.....	S.	.....	S.	b 1	Naval Station, Key West, Fla.
Modoc.....	241	do.....	I.	.....	S.	.....	Navy-yard, League Island.
Mohawk	420	do.....	S.	400	S.	.....	Navy-yard, Norfolk.
Narkeeta	192	do.....	S.	300	S.	.....	Navy-yard, New York.
Nezinscot.....	156	do.....	S.	400	S.	b 2	Navy-yard, Portsmouth.
Nina.....	357	do.....	I.	388	S.	.....	Navy-yard, New York.
Osceola	571	do.....	S.	.....	S.	b 2	Naval Station, Key West.
Pawnee	275	do.....	W.	250	S.	.....	Navy-yard, New York.
Pawtucket	225	do.....	S.	450	S.	.....	Navy-yard, Puget Sound.
Penacook	225	do.....	S.	450	S.	.....	Naval Station, Port Royal.
Piscataqua	631	do.....	S.	1,600	S.	b 4	Asiatic Station.
Pontiac	401	do.....	.....	425	S.	b 3	Navy-yard, New York.

a Torpedo tubes.

b Estimated.

c Secondary battery.

NEW VESSELS AUTHORIZED.

At the last session of Congress, by act of July 1, 1902, the construction of the following additional vessels of the Navy was authorized: Two battle ships, one to be built at such navy-yard as the Secretary might designate; two armored cruisers, and two gunboats. In pursuance of this act the Department without delay approved plans for the construction of the two battle ships and directed that work on one of them, the *Connecticut*, be commenced at once at the navy-yard, New York.

The contract for the construction of the other battle ship, the *Louisiana*, has been awarded to the Newport News Shipbuilding and Dry Dock Company, after competition, for the sum of \$3,990,000. The specifications for these two battle ships, the most powerful yet laid down by the Navy, call for vessels 450 feet in length upon the load water line; about 77 feet beam; gross draft, about 26½ feet; trial speed at sea, to be maintained four hours, 18 knots. It is intended to give these vessels each a main battery of four 12-inch, eight 8-inch, and twelve 7-inch breech-loading rifles, and a secondary battery of twenty 3-inch 14-pounder rapid-fire guns, twelve 3-pounder semi-automatic guns, six 1-pounder automatic guns, two 1-pounder semi-automatic guns, two 3-inch field pieces, two machine guns, caliber .30, and six automatic guns, caliber .30.

In pursuance of the requirements of the act of July 1, 1902, above mentioned, instructions have been issued providing for the keeping of an accurate and detailed account of the cost of inspection and construction of these two battle ships, in order that the relative cost of navy-yard and contract construction may be ascertained and reported to Congress as the law directs.

The plans and specifications for two 14,500-ton armored cruisers, the *Tennessee* and the *Washington*, are completed. Bids for their construction will be opened on January 6, 1903. The plans and specifications of the 1,000-ton gunboats, the *Dubuque* and the *Paducah*, will soon be ready.

The plans and specifications of the *Connecticut* and the *Louisiana* were approved by the Department with the purpose of producing "first-class battle ships carrying the heaviest armor and most powerful ordnance for vessels of their class, * * * and to have the highest practicable speed and great radius of action," in accordance with the intention of Congress as expressed in the act authorizing their construction. That is to say, these two vessels are to be battle ships in the strictest sense, equipped with the most powerful guns, and protected by the heaviest armor in use in the Navy; the weights of such armor and armament to be carried, however, without seriously reduc-

ing bunker capacity, since the act also requires that they shall have "great radius of action."

After most careful consideration the speed to be developed was fixed at 18 knots, with a margin, under penalties, of one-half knot, this being regarded as the highest speed that could be attained within the prescribed limitations of cost and displacement, and with due regard to the character of these vessels as battle ships of the first class, able to keep the seas against any war ships afloat.

In making provision, separately from the battle ships, for the two vessels above referred to as the *Tennessee* and the *Washington*, as well as by designating them as "armored cruisers," Congress made plain its desire that they should be vessels of a different type. In drawing the plans and specifications, this purpose has been kept in view, and, accordingly, the *Tennessee* and the *Washington* are to have less armor protection and lighter batteries, but more speed, than the battle ships. They are to be provided with a water-line armor belt of a maximum thickness of 5 inches, instead of 11 inches as in the case of the battle ships; and with respect to armament, where the battle ships will be given four 12-inch, eight 8-inch, and twelve 7-inch guns, the cruisers are to have four 10-inch and sixteen 6-inch guns.

The act prescribes in the case of the armored cruisers also that they shall have "great radius of action," and accordingly their bunker capacity is to be substantially the same as that of the battle ships; but inasmuch as speed is an important characteristic of vessels of the cruiser class, the speed to be attained by the *Tennessee* and the *Washington* has been placed at 22 knots, with a margin, under penalties, of one-half knot.

While thus differing in the salient features of armor, armament, and speed, the distinction between the cruisers and the battle ships is also carried out in minor details of construction. It is believed that these four powerful vessels of war, when built upon the plans and specifications approved by the Department, will fulfill the requirements of the act authorizing them as precisely as the present state of naval construction will admit, and will form a substantial addition to the fighting ships of the Navy.

THE FUTURE OF THE NAVY.

Among the most important lessons learned in the war with Spain was that a modern navy can not be improvised during a war or upon the threshold of a war. Much money was then expended in the purchase of ships. Many of them served useful auxiliary purposes, but it may well be doubted whether they added materially to the fighting efficiency of our fleet. The time best suited to the development and perfection of our Navy is the time when there is neither war nor

threat of war. Happily the present is such a time, and it permits a dispassionate consideration of the future.

The country approves, with hardly a dissenting voice, the policy of strengthening our power upon the sea. What would have been an adequate navy some years ago is totally inadequate for the performance of the duties growing out of our new possessions in the Pacific and Atlantic and the determination of Congress to construct a canal across the Isthmus.

If, then, the policy of strengthening our power upon the sea to the point where it can respond to the national needs be not abandoned, the Navy has manifold needs. There must be additional naval and coaling stations; more ships, fighting and auxiliary; and an increase of officers and men. In all of these respects, Congress in the past has dealt with the Navy wisely and generously, and I doubt not that in the future it will as accurately register the will of the people.

The most imperative need of the Navy to-day is of additional officers. I can not overstate this need. It invites the instant attention of Congress. The administration of the Department is embarrassed almost daily by the lack of officers below command rank. This condition has been approaching for some years, and was clearly apprehended and stated by my predecessor in office. It is acute to-day, and, when the ships already authorized are completed, it will be desperate unless there is early action.

A statement of this kind can not safely rest upon mere assertion, but demands verification by a comparison of the number of officers with the duties which are required of them. Recognizing clearly that the same deficiencies exist in the staff corps and that an enlargement of them is urgently demanded, I will nevertheless here make the comparison solely with respect to the officers of the line, selecting the 1st day of October last as a recent date illustrative of the present condition. Following is a table descriptive of the conditions then existing:

Number of line officers, including midshipmen, required for vessels now on the navy list	1, 206
Officers on inspection, court-martial duty, Naval Academy, recruiting, ordnance, equipment, and engineering duty	264
In transit to and from stations	70
Sick	30
Leave or waiting orders	30
Total	1, 600
Number of officers now on navy list, including midshipmen after graduation	1, 023
Deficiency	577

In the above table only the serviceable ships of the Navy are included, and to them there is allotted only the minimum number of officers required, the allowance being less than that made in the other

navies of the world. It is too obvious to need more than mention that with squadrons in Pacific, Asiatic, European, North and South Atlantic waters, there must always be a certain number of officers in transit from one point of duty to another, and for the time being withdrawn from active duty.

In considering the effect of this table it must be remembered that ordinarily in peace a considerable portion, say one-quarter, of the serviceable ships would be out of commission undergoing repairs and improvements, and that thus approximately three hundred officers would be released for other duty. Even in such case, and by the detachment of officers from every point of duty on shore where the law and the absolute requirements of the service would permit it, we could not in time of peace officer three-quarters of our present fleet.

But any comparison which does not take into account at least the future which is in sight would be totally inadequate, and therefore I project the comparison into the four years of our immediate future. The following table shows the number of combatant ships in course of construction and authorized and the number of officers necessary for them:

Vessels.	Officers.	Vessels.	Officers.
Maine	17	Des Moines.....	12
Georgia.....	17	Chattanooga.....	12
Pennsylvania.....	17	Tennessee.....	15
Rhode Island.....	17	Washington.....	15
Louisiana.....	17	Arkansas.....	7
California.....	15	Nevada.....	7
Nebraska.....	15	Wyoming.....	7
West Virginia.....	15	Paducah.....	7
Maryland.....	15	5 submarines.....	5
Colorado.....	15	Cleveland.....	12
South Dakota.....	15	Galveston.....	12
Connecticut.....	17	Tacoma.....	12
Ohio.....	17	Florida.....	7
Virginia.....	17	Dubuque.....	7
Missouri.....	17	18 torpedo-boat destroyers.....	39
New Jersey.....	17	7 torpedo boats.....	14
St. Louis.....	12		
Milwaukee.....	12	Total officers necessary for the	
Charleston.....	12	new vessels, for which no pro-	
Denver.....	12	vision has been made.....	498

The importance of these ships is seen at a glance. Allowing the same proportion of officers in transit, on shore duty, sick, and on leave, will require 623 officers to produce the 498 demanded by our new ships. In these four years, moreover, it is estimated that not less than 160 officers will leave the service through resignation, retirement, or death. The deficiency in the number of officers required for the full complement of naval duty as indicated above will be at the end of four years as follows:

Present deficiency.....	577
Needed for new ships.....	623
Needed to fill vacancies.....	160
Total deficiency.....	1,360

I am informed that under existing conditions 355 graduates of the Naval Academy may be expected during these four years. There is no other source of supply except a number, not exceeding six per annum, which may be obtained by the promotion of enlisted men. Unless, therefore, the above computation can be shown to be erroneous, we shall have in the near future something more than a thousand officers less than the proper complement.

The officers we need can be obtained from three sources only—by appointment from civil life, by promotion from the ranks, or by education and training at the Naval Academy. The first source has been so uniformly rejected by the opinions of all, that I will not discuss it. Congress has indicated its opinion by abandoning this method in the Marine Corps, and would not, it is assumed, adopt it for the line of the Navy. The law already allows promotion from the ranks of not exceeding six enlisted men per annum. The provision of the law is as follows:

Whenever, in view of the vacancies in the grade of ensign on July thirtieth of any year unfilled by graduates of the Naval Academy, the Secretary of the Navy shall so recommend, the President may appoint to that grade, as of July thirtieth, from among the boatswains, gunners, or warrant machinists, not exceeding six in any one calendar year. No person shall be so appointed who is over thirty-five years of age; who has served less than six years as a warrant officer; who is not recommended by a commanding officer under whom he has served; nor until he shall have passed such competitive examination as may be prescribed by the Navy Department.—Act of March 3, 1901.

Under this law there have been up to the present time three warrant officers commissioned as ensigns: Henry B. Soulé, formerly a gunner, appointed an ensign from the 30th day of July, 1901; Francis Martin, formerly a gunner, appointed an ensign from the 30th day of July, 1901; Louis J. Connelly, formerly a gunner, appointed an ensign from the 30th day of July, 1902.

I recommend that this law be amended so as to permit the promotion of not more than 12 per annum.

But the main source of our supply of officers must be from the Naval Academy. The duties of the modern naval officer are so varied and complex that they demand a rigorous and protracted education and training. This training and education can best be obtained at the national school at Annapolis. That school produces officers the equal of any in the world. When the best are obtainable, we need not content ourselves with anything less than the best. The nation has devoted many millions of dollars to the upbuilding of this school, instituted and maintained for the single purpose of producing naval officers of the highest type.

With the utmost wisdom, Congress has prescribed that the students shall be selected in uniform proportions from all sections of our country, and, in practice, all classes of our people are represented there.

Naval officers do not constitute a caste; our system of selection brings to our service each generation the new blood of our democracy. It admits none by favor; it excludes all except those of the highest mental and physical vigor. Thus selected, thus educated, inspired by our naval traditions, we may be assured that these young men will reach and maintain the highest standard of efficiency.

I therefore earnestly recommend that without a year's delay the number of midshipmen at the Academy be increased sufficiently to meet present and prospective needs of the service.

It should be stated that as the Navy is now constituted there is and will be in the immediate future a sufficient number of officers above the rank of lieutenant-commander. The increase should be in the number of lieutenant-commanders, lieutenants, and ensigns, and care can and should be exercised to prevent stagnation in promotion, in order that officers may attain command rank at a sufficiently early age, for reasons which are so obvious and have been so frequently stated that they need no repetition.

It has sometimes been suggested that the insufficiency of officers is due in part, at least, to the number detailed for the performance of shore duty. This suggestion demands careful consideration. The number of officers on shore duty is to some extent within the control of the Secretary of the Navy, and to that extent is a question of administration merely. Early after the assumption of the duties of my office I issued a circular letter, of which the following is an extract:

I am advised that the increase of the ships and enlisted men of the Navy results in a demand for officers for the active duties on board ship, the training of enlisted men on shore, and other shore duties of a naval and military nature. For this reason the Department desires a reduction to the amount of not less than 20 per cent in the number of officers employed on work not purely naval or military, wherever such reduction is practicable. You will please make such arrangements as will tend to produce this result, notifying the Bureau of Navigation of positions that can be vacated by commissioned officers now serving therein on the assumption that their duties may be performed by civilians or by retired officers of the Navy, or merged with those of other positions.

The Department does not contemplate sudden action in this matter, but desires changes, where practicable, to be made gradually. The Department fully realizes that many naval duties of the highest importance must be performed on shore, and that the complete equipment of a naval officer demands shore duty of certain kinds as well as sea service, but desires the work performed by officers, whether at sea or on shore, to be of a naval or military character.

The efforts of my predecessor and myself have diminished the number of line officers on shore duty from 275 on January 1 last to 203 on November 15 current, being a reduction of 72, or 28 per cent. The percentage of officers on shore duty on January 1 was 26.8, and on November 15 was 19. This reduction has not been accomplished without the protest of some of the ablest officers, especially those at

the heads of the several bureaus. The weight of this protest is not overlooked, and it is recognized that in some cases the action of the Department can only be justified by the fact that officers have been detached from stations on shore for the performance of more essential duties at sea. There follows a table showing the detail of the above statements, and a list of the officers serving on shore duty on November 15, with the positions which they respectively fill.

Number of line officers available for sea duty performing shore duty.

Rank.	Jan. 1, 1902.		Nov. 15, 1902.	
	Number.	Per cent.	Number.	Per cent.
Rear-admirals	14	51.4	15	51
Captains	36	50	34	46.6
Commanders	50	42.7	45	38.5
Lieutenant-commanders	58	33.1	52	30.2
Lieutenants	81	26.4	44	14.6
Lieutenants, J. G.	36	46.1	12	12.7
Ensigns	0	.0	1	.7
Midshipmen	0	.0	0	.0
Total on shore	275	26.8	203	19.0
Of line officers in service.....	1,023	.....	1,045	.....

Reduction of officers on shore, 80, or 29.09 per cent.

SHORE DUTY OF LINE OFFICERS.

REAR-ADMIRALS.

George C. Remey, Light-House Board (chairman).
 John C. Watson, president naval examining and retiring boards.
 Louis Kempff, naval coast defense, district Pacific coast.
 Albert S. Barker, commandant navy-yard, New York.
 Charles S. Cotton, commandant navy-yard, Norfolk, Va.
 Silas W. Terry, commandant navy-yard, Washington, D. C.
 Merrill Miller, commandant navy-yard, Mare Island, Cal.
 John J. Read, commandant navy-yard, Portsmouth, N. H.
 Mortimer L. Johnson, commandant navy-yard, Boston, Mass.
 Henry C. Taylor, Chief Bureau Navigation.
 Charles E. Clark, governor, Naval Home.
 Philip H. Cooper, coast defense, district Atlantic coast.
 James H. Sands, commandant navy-yard, League Island, Pa.
 William C. Wise, commandant Pensacola Navy-Yard and Coast-Defense District.
 Yates Stirling, commandant Puget Sound Navy-Yard.
 Total number in grade, 24; number on shore duty, 15; 51 per cent.

CAPTAINS.

Purnell F. Harrington, captain of the yard, New York, N. Y.
 Francis A. Cook (sick leave).
 Colby M. Chester, superintendent Naval Observatory.
 Charles J. Barclay, captain Boston Navy-Yard.
 Charles D. Sigsbee, Chief Intelligence Officer.
 Benjamin P. Lamberton, Light-House Board.

of others, and sometimes an officer who possesses exceptional scientific equipment is, for that reason, kept upon shore duty so long that his efficiency as a seagoing officer and as a commander of men is endangered.

I shall endeavor to apportion among officers sea and land service as justly as conditions will permit. But it is well worth consideration whether a certain proportion of service at sea should not be required by law as an indispensable condition of promotion. Such requirements are made by law or practice in other navies.

The chiefs of the several bureaus, in their annual reports for the fiscal year, make recommendations of importance upon the special subjects under their charge, and set forth particularly the needs, both as to matériel and personnel, of the branches of the Navy over which, respectively, they have supervision. Without undertaking here to repeat or discuss these recommendations in detail, I commend them to considerate attention, deeming it sufficient to say that in dwelling, as I have done, upon the needs of an increase of the line, I do not mean to minimize the importance of a corresponding increase of the staff corps. On the contrary, it appears to require no argument to show that such proportionate increase should be made.

ENLISTED MEN.

The number of enlisted men in the naval service on June 30, 1902, was 21,433. Of these 8,032 were landsmen for training and apprentices. Many of these came from the middle Western States, and at the time of their enlistment were unacquainted with the new life upon which they had entered. Their progress has been eminently satisfactory.

All men now enlisted are required to be either citizens or to have declared their intention to become such. Eighty-nine per cent of the enlisted force are now citizens and 76 per cent are native born. Ninety-three and three-tenths per cent of the landsmen for training and 94 per cent of the apprentices are native born.

The advance in general intelligence and education of the enlisted men presents new problems which, with all other questions concerning them, are receiving the critical attention of the Department. It is believed that in intelligence, education, adaptability to the service, and fidelity to its interests our men will compare favorably with those of any other navy.

The work of the Naval Young Men's Christian Association has become so important and beneficial to the enlisted men of the Navy and Marine Corps that it deserves public recognition. In May last, near the New York Navy-Yard, a fine building completely equipped was dedicated and opened to the uses of the men. The building with its furniture and equipment was given by patriotic and public-spirited

women. There is here furnished what is practically a clubhouse in which the men can, at a reasonable price, obtain excellent meals and lodging and opportunity for healthful and rational recreation. At Norfolk, more recently, a like institution has been established. Work of this kind is entirely beyond governmental scope and must always depend on private munificence. Good results already abundantly appear, and I take this occasion to extend the thanks of the Navy to our benefactors.

In the Mess Manual, recently promulgated by the Department, provision is made for the establishment of stores on the various vessels of the Navy for the sale of miscellaneous articles not provided for in the ration. It is believed that the establishment of such stores would add to the comfort of the enlisted men and obviate danger to health from miscellaneous purchases under usual harbor conditions. It has been found a serious drawback that there is no fund from which such stores can be stocked. Stores can only be established when the capital for the original stock of goods is made up by subscription by the men of the ship. This has been found to be unsatisfactory in practice, and I recommend that the Department be authorized by law to provide these stores, with a provision for reimbursement. This would not add at all to the public expenditures. It should also be added that beer or other intoxicating drinks can not under any circumstances constitute a portion of the stock of the stores so established.

The present number of enlisted men authorized by law is 28,000. By enlistment since the close of the fiscal year, the number of men in the service has been brought up to 25,258 on November 15, current, and it is believed that by February next the full number authorized will be enlisted. The same reasons which demonstrate the necessity for an increase of officers call for the increase of men. The increase can be made gradually, and I recommend that an addition of 3,000 be authorized during the next fiscal year.

Many of our men leave the service at the completion of the first enlistment. One cause of this is that they have received in the service a training which fits them for positions of responsibility in civil life with compensation greater than the Navy can afford to pay. Such an education is not wasted but inures to the public welfare. Moreover, it may be hoped that those who leave the Navy at the end of a single enlistment would constitute an unofficial reserve which might be drawn upon in time of need.

INCREASE OF SHIPS.

After most careful consideration, I believe it to be my duty to recommend a continuance without interruption of the increase of ships. The precise type of ships authorized must, of course, like the authorization itself, be referred to the wisdom of Congress, to whose

committees recommendations in detail may be made. Differences of opinion exist among naval authorities, but all agree that not less than two battle ships should be among the number authorized. Whether the others should be of the armored-cruiser type or of the unarmored cruiser and gunboat type which have proved so useful, may well be left for future discussion.

A permanent ambulance or hospital ship, designed for hospital purposes only, and having the right to fly the flag of the Geneva Conference, would undoubtedly prove an important adjunct to extended naval maneuvers, whether in time of war or peace. The work of the *Solace* and *Bay State* throughout the period of the Spanish war, in the West Indies and during subsequent activities in the Far East, established the value of hospital ships in time of war.

In time of peace such a vessel should accompany each large squadron in the more serious evolutions as a hospital, and also as a recreation asylum for debilitated members of the ships' companies. But their most important service would be as ambulance vessels, to carry the sick and disabled from the fleets or from tropical island stations to naval hospitals, giving them while in transit intelligent and wholesome care. Two vessels of this type, one for the Atlantic and one for the Pacific, to be equipped for the work outlined in time of peace, and ready for instant service in time of war, are earnestly recommended.

NAVAL STATIONS.

There is no subject which deserves more careful consideration than that of naval stations. Their situation and development have sometimes been controlled more by accident and local wishes than by the broader consideration of national needs. We surely have an abundance of them within the United States, but there is imperative demand for the establishment of a naval station in the Philippines and in the West Indian islands or the Caribbean. My own experience leads me to express the hope that Congress will make some provision which will enable the committees especially charged with the consideration of naval affairs to inspect our naval stations. I can not but believe that such an examination would result in very considerable economy in public expenditures. If the examination could be extended, as it should be, beyond the seas, it would insure the selection of proper sites and their development on wise and economical lines.

PROTECTION OF ARTISAN EMPLOYEES.

In your message to the first session of the Fifty-seventh Congress you said:

The National Government should demand the highest quality of service from its employees, and in return it should be a good employer.

There are employed as artisans under this Department about 15,000 men. With them Congress has dealt liberally in respect of vacations, hours of labor, and rates of pay, but in one respect their condition compares unfavorably with those in private employment. If one of them, while in the exercise of due care, suffers injury or death through the negligence of the Government, he is absolutely without remedy either at common law or under any statute. The only compensation which may be given him is, in the case of personal injury, a special preference for reemployment, which has in some cases operated to the detriment of the public service.

It is a constant occurrence in the navy-yards that subscriptions are taken up among the officers and men for employees who have been injured and whose families are in distress during their period of enforced idleness. I earnestly hope that this omission in our law may be cured by legislation, and that the artisan employees of this department injured without fault of their own may be afforded a remedy. An injury which destroys or impairs the capacity to work of a man who works with his hands is an overwhelming calamity to himself and those dependent upon him. His death often throws upon the world a helpless family. It is but simple justice that in this respect the Government artisan should be placed upon an equality with his brother in private employment. The total cost to the Treasury would be small, though the benefit to him and his family would be great.

NAVAL ACADEMY.

The act for rebuilding the Naval Academy, approved June, 1900, authorized the expenditure of \$8,000,000, and provided that plans, covering the entire improvements, should be adopted by the Secretary before any part of said sum should be expended.

The Secretary approved plans October 3, 1900, and allotted such sums for the several buildings and improvements contemplated as would cover \$8,000,000, reserving \$390,000 as a contingent fund.

The act of July, 1902, appropriating for the improvements at the Academy in accordance with these plans, authorized the building of a hospital at a cost not to exceed \$100,000, and additional dredging at a cost of \$200,000, and further provided that the cost of such hospital and dredging should be paid out of said \$8,000,000. As in obedience to the law, my predecessor had allotted the \$8,000,000 prescribed as the limit of cost of the improvements at the Academy, it is impossible to execute the provisions for the erection of a hospital and for dredging without exhausting the fund reserved for contingencies, which is already sufficiently small. Accordingly these two improvements will not be undertaken without further authority from Congress. But a still more serious question has arisen. The architect in

As the result of the investigations thus far conducted the Chief of the Bureau of Steam Engineering recommends the installation of liquid-fuel appliances without delay in at least a third of the torpedo boats and destroyers. With respect to the larger war vessels, and particularly the battle ships, the installation of liquid fuel presents serious difficulties, entirely apart from the question of the satisfactory use of oil under boilers. The safe and convenient storage of a sufficient supply of liquid fuel beneath the protective decks of large ships of war, and the question of replenishing exhausted fuel supply, whether in time of war or peace, in case of vessels liable to be sent without warning to unfrequented harbors, are grave matters. Inasmuch as such obstacles are more easily dealt with in the case of commercial steamers, the problem of installing liquid fuel upon fighting vessels differs in important features from the same problem as applied to transports or to the mercantile marine.

ORDNANCE.

During the past year 233 guns, chiefly of large caliber, have been manufactured at the Naval Gun Factory, making a total of 1,210 guns thus far made at that establishment. No material change has been made in the method of gun construction, except that the tubes of all guns of and above 6 inches in caliber are now reinforced to the muzzle. Very great increase in energy has, however, been obtained by increasing the length and weight of guns and by the use of smokeless powder.

The manufacture of armor has progressed satisfactorily, 7,612 tons having been delivered at the various shipyards during the past year, and a considerably larger quantity will probably be delivered during the ensuing year. The armor manufacturers recently made a voluntary reduction of 10 shillings per ton in royalty for the Krupp process.

The manufacture and introduction of smokeless powder has been proceeded with as rapidly as practicable. Beginning with the *Kearsarge* and *Kentucky*, all the new ships of the Navy and some thirty of the older vessels have been supplied with smokeless powder. No other powder has been bought or manufactured for the Navy since 1898, except for auxiliary purposes.

The most interesting event of the year in connection with projectiles is the development of a new type of shell having the perforating power of an armor-piercing projectile, with a capacity for a large bursting charge. Several lots of such projectiles have passed the required test of perforating unbroken a plate of hard-faced armor a caliber in thickness, remaining in condition for effective bursting.

During the fiscal year 34 ballistic tests of armor were made and 128 guns, chiefly of large calibers, were tested at the naval proving

ground; also 486 projectiles, 100 samples of smokeless and 5 lots of brown powder.

No accidents to guns have occurred during the year at the proving ground. In July last one of the powder drying houses was struck by lightning, and the building and its contents were destroyed by fire. There was, however, no explosion.

During the past year classes of officers and enlisted men have been instructed at this station in electricity, torpedoes, and explosives.

All new small arms purchased for the Navy for several years past have been of caliber .30, the same as used by the Army. There remain, however, a number of six-millimeter rifles still in service, which will be retired as soon as practicable.

The Chief of the Bureau of Ordnance calls attention to the urgent need of a new naval magazine at Boston. There is no naval magazine worthy of the name east of New York, a state of affairs bad enough in time of peace, but which would become serious in the event of war. The present magazines at Boston, built in 1835, and located on part of the reservation in Chelsea where the U. S. Naval and U. S. Marine Hospitals are situated, are too near to populous portions of the city to be longer used for the purpose. Large manufacturing interests have grown up in proximity to these magazines. The explosion of 6 tons of black powder, occurring on Governors Island, in Boston Harbor, on the 7th of September last, illustrates the danger of storing naval ammunition in the neighborhood of structures used for other purposes, whether private or public. The Bureau submits an estimate of \$300,000 for the construction of magazines in a suitable location, and expresses the belief that if such appropriation is made there will be no difficulty in procuring an appropriate site in such place as to be readily accessible by rail and water without rendering necessary the transportation of ammunition through the streets of the city.

EQUIPMENT.

The Chief of the Bureau of Equipment reports the purchase, after investigation, of apparatus for the purpose of conducting experiments in wireless telegraphy, according to four different systems recently developed in Europe and offering promise of usefulness to the Navy. Stations have been established at the navy-yard, Washington, and at Annapolis, Md., and experiments will thus be conducted between points distant from each other about 30 miles. Upon the completion of a series of overland tests, it is proposed to install one set of each kind of apparatus on board a ship and the corresponding set at Annapolis, Md., in order to conduct tests from ship to shore at varying distances. The next step will be to install apparatus on board separate ships, in order that tests may be made at sea, outside of land interferences.

In order to ascertain the effect of varying climatic conditions upon the workings of wireless apparatus a station will also be established at Key West, Fla. A number of vessels of the Navy have been prepared, so far as the necessary changes in their masts are concerned, for the installation of wireless apparatus. If satisfactory arrangements can be made for the acquisition of instruments developed by other systems the Department will undertake tests to determine their value to the Navy.

In recommending that the Government obtain control of all wireless telegraph stations, the Chief of the Bureau of Equipment says:

It appears to be well established that the operation of any wireless transmitting apparatus will affect any wireless receiving apparatus within a certain distance, which distance may be considered as its radius of influence. As a direct consequence thereof the signals which may be sent by other wireless transmitters within this radius of influence will be more or less obscured at all receiving stations within the same circuit; in other words, when the transmission of wireless messages is attempted by two or more operating stations at the same time, their interference will probably prevent the reception of a legible message at any receiving station. It is claimed by certain inventors that this interference can be overcome, but these claims do not appear to be substantiated, and it is therefore possible at present for any operator controlling a powerful transmitting apparatus to prevent the reception of a message within its radius of influence.

* * * * *

In time of war the Department will undoubtedly find it necessary to communicate by means of wireless telegraphy with certain receiving stations along the coast. Nothing should be permitted to interfere with the transmission of such messages, nor should it be possible for unauthorized persons to receive them.

While the total quantity of coal consumed by the Navy during the fiscal year shows an increase of 18 per cent, there was a decrease of 16 per cent in foreign and an increase of 34 per cent in domestic coal used. Of the coal purchased for the Navy (382,040 tons) 293,438 tons were purchased within the United States, at an average cost per ton, including transportation, of \$5.26. At present the Navy is obtaining the best domestic coal, at a cost of "about \$2.50 per ton f. o. b. at the tidewater outlets of the mines." Ships on our own coast and in the West Indies can therefore be supplied at reasonable rates; but in the Pacific, where good coal is scarce, and where it must be transported long distances, and in the Orient, the cost is two or three times as great. The foreign coal bought during the year, 88,602 tons only, was procured at an average price of \$7.63 per ton.

The act of Congress approved March 3, 1901, contained a clause appropriating the sum of \$150,000 to enable the Secretary of the Navy "to acquire land for a naval station and harbor and channel defense, at Pearl Harbor, Hawaii." In pursuance of this authorization about 719 acres, chiefly on the mainland, have been acquired.

DOCKAGE AND BERTHAGE.

The steel floating dry dock constructed at Baltimore, which has the distinction of being the largest structure of its kind in the world, has been successfully towed from Sparrow Point, Chesapeake Bay, where it was built, to the naval station, New Orleans, La. It sustained without injury the long ocean trip and the tests prescribed by the contract, and has been accepted. It constitutes a valuable addition to the docking facilities of the Navy, being one of the two dry docks completed capable of accommodating the largest battle ships. Its first work was the docking of the battle ship *Illinois*.

The steel floating dry dock at Havana, formerly the property of Spain, was acquired by this Government by purchase, and was so far repaired and improved as to be about ready for use when it broke down under weights to which it was subjected in the course of docking pontoons. At the date of this report it is being towed from Habana to the Pensacola Navy-Yard.

Dry docks of concrete and stone, capable of accommodating the largest vessels of the Navy, are in process of construction at the navy-yards at Boston, Portsmouth, League Island, Charleston, and Mare Island.

Progress has been made toward providing additional berthing accommodations for vessels lying at the several yards for purposes of repair and outfit. The Chief of the Bureau of Yards and Docks reports that the acquirement at the Boston Navy-Yard of a large tract of underwater land, conveyed to the United States without cost by the State of Massachusetts, has enabled the Bureau to project and construct piers extending outward from the original wharf line over such submerged land, thus greatly increasing the number of vessels accommodated by the wharves and facilitating the handling of work at that station. In the same line is the deep-water basin under construction at Norfolk, which will soon be available. Additional berths are also being provided at Mare Island, Cal., and Puget Sound, Washington.

The adoption for these purposes and for dry docks of the more permanent concrete construction, replacing the wooden structures, is an important step in advance. The Chief of the Bureau reports that the public works at the navy-yards will be far short of the necessities of the service when all improvements now in progress and projected are completed.

HEALTH OF THE NAVY.

The health of the Navy and Marine Corps has been good throughout the past year, the percentage of sick and the death rate being lower than for several years past.

Notwithstanding the fact that cholera appeared in Manila in March

last, and has since that time been more or less prevalent among the natives elsewhere in the Philippine Islands, there have been few cases among the naval forces. This exemption is due in large measure to prompt precautions taken. Nevertheless, the death from this disease of Lieutenant Rask, U. S. Marine Corps, of Warrant Machinist Ditt-rich, U. S. Navy, and a number of private marines has been reported.

During the interregnum between the withdrawal of Spanish authority and the establishment of that of the United States in Guam a number of lepers escaped from sequestration, and have since been kept in concealment by people of the island, ignorant of the dangers so incurred. An isolated settlement, with hospital buildings, mess room, kitchen, chapel, etc., has recently been provided for the unfortunates afflicted with this disease in what is known as the Tumon Bay colony.

Young medical officers entering the service without previous naval training must have some special instruction in the nature of a post-graduate course, to fit them for the specialized duties of the Medical Corps, as well as to equip them in some measure to meet the general responsibilities and obligations resting upon them as officers of the Navy, who may at any time be detailed as members of boards, courts of inquiry, and courts-martial. Such instruction was formerly given at the naval laboratory, New York, but was discontinued at the outbreak of the war with Spain. In considering the question of its reestablishment the advantages of carrying on work of this character in Washington became apparent.

The buildings of the Museum of Hygiene, on the old Naval Observatory reservation, afford accommodations readily adaptable to the purpose, and the system of concentrating board work in Washington makes available from the members of boards a faculty of experience and reputation. Certain special and important instruction may also be more readily provided in this city than elsewhere. Accordingly, by the Department's order of May 27, 1902, the Naval Museum of Hygiene and Medical School was established.

The building occupied as a naval hospital at Washington is reported to be antiquated and insufficient, its quarters cramped, the operating room small and ill adapted to its purposes, and the accommodations for officers insufficient. The establishment of a hospital more commensurate with the needs of the station is recommended, and an estimate for this object has been submitted by the Surgeon-General.

MISCELLANEOUS RECEIPTS.

In accordance with the act of Congress approved August 5, 1882, the usual detailed statement of deposits on account of the sales of Government property, etc., prepared in the office of the Auditor for

the Navy Department, will be found in the appendix. This statement shows that the total amount deposited in the Treasury from November 1, 1901, to October 31, 1902, arising from the sale of condemned naval vessels, stores, materials, nautical books and charts, fuel, clothing, rents of Government property, supplies furnished to other branches of the Government, and from other lawful disposition of public property under the cognizance of the Navy Department, was \$281,506.54. Of this sum, \$102,199.53 was covered into the Treasury as "Miscellaneous receipts on account of proceeds of public property," as required by section 3618 of the Revised Statutes. The balance, \$179,307.01, has been carried, as authorized by law, to the credit of the proper appropriations, to be applied to naval purposes.

This statement shows six deposits that were made in October, 1901, but were not included in the statement of last year because a proper disposition of the money had not then been determined and it had not then been covered into the Treasury.

FINANCIAL STATEMENT.

Appropriations, expenditures, and balances for the fiscal year ending June 30, 1902.

Title of appropriation.	Appropriations for fiscal year 1902, ex- clusive of public works.	Amounts drawn in fiscal year 1902.	Balances June 30, 1902.
General establishment:			
Pay of the Navy.....	\$15, 150, 284. 00	\$10, 998, 149. 95	\$4, 252, 134. 05
Pay, miscellaneous.....	600, 000. 00	512, 786. 56	87, 213. 44
Contingent Navy.....	10, 000. 00	6, 832. 46	3, 167. 54
Emergency fund, Navy Department.....	200, 000. 00	28, 554. 35	171, 445. 65
Bureau of Yards and Docks:			
Maintenance.....	552, 000. 00	461, 568. 60	90, 431. 40
Repairs and preservation, navy-yards.....	500, 000. 00	393, 595. 66	106, 404. 34
Civil establishment.....	104, 879. 08	96, 795. 17	8, 083. 91
Contingent.....	50, 000. 00	20, 543. 73	29, 456. 27
Bureau of Equipment:			
Equipment of vessels.....	1, 950, 000. 00	1, 306, 733. 37	643, 266. 63
Contingent.....	35, 000. 00	13, 901. 47	21, 098. 53
Coal equipment.....	2, 800, 000. 00	1, 632, 309. 88	1, 167, 690. 12
Civil establishment.....	29, 802. 52	25, 815. 19	3, 987. 33
Ocean and lake surveys.....	100, 000. 00	36, 445. 59	63, 554. 41
Naval Observatory.....	12, 000. 00	11, 031. 98	968. 02
Bureau of Navigation:			
Pay, Naval Academy.....	107, 815. 45	107, 600. 00	215. 45
Heating and lighting, Naval Academy.....	20, 000. 00	13, 427. 82	6, 572. 18
Special course, Naval Academy.....	4, 500. 00	4, 500. 00	.....
Contingent, Naval Academy.....	43, 800. 00	39, 283. 60	4, 516. 40
Naval War College.....	11, 200. 00	9, 544. 56	1, 655. 44
Naval training station, Rhode Island.....	45, 000. 00	44, 484. 53	515. 47
Naval training station, California.....	30, 000. 00	25, 656. 18	4, 343. 82
Transportation, recruiting, and contingent.....	180, 000. 00	114, 732. 81	65, 267. 19
Maintenance of colliers.....	350, 000. 00	264, 893. 05	85, 106. 95
Gunnery exercise.....	12, 000. 00	9, 837. 89	2, 162. 11
Outfits for naval apprentices.....	117, 000. 00	.....	117, 000. 00
Outfits for landsmen.....	225, 000. 00	.....	225, 000. 00
Naval Home, Philadelphia, Pa.....	76, 425. 00	57, 793. 35	18, 631. 65

Appropriations, expenditures, and balances for the fiscal year ending June 30, 1902—Con.

Title of appropriation.	Appropriations for fiscal year 1902, ex- clusive of public works.	Amounts drawn in fiscal year 1902.	Balances June 30, 1902.
Bureau of Ordnance:			
Ordnance and ordnance stores	\$1,825,000.00	\$910,652.50	\$914,347.50
Repairs	40,000.00	35,065.98	4,934.02
Contingent	75,000.00	27,340.08	47,659.92
Civil establishment	36,606.75	35,748.46	858.29
Torpedostation	65,000.00	56,575.37	8,424.63
Arms and equipment, Marine Corps	100,000.00	79,049.04	20,950.96
Bureau of Construction and Repair:			
Construction and repair	7,000,000.00	5,625,743.04	1,374,256.96
Civil establishment	25,824.25	25,676.00	148.25
Bureau of Steam Engineering:			
Steam machinery	3,245,000.00	2,323,977.03	921,022.97
Civil establishment	16,900.00	16,631.79	268.21
Contingent	1,000.00	761.19	238.81
Bureau of Supplies and Accounts			
Provisions, Navy	3,250,000.00	2,437,460.36	812,539.64
Contingent	200,000.00	99,664.19	100,335.81
Civil establishment	93,849.28	76,300.81	17,548.47
Bureau of Medicine and Surgery:			
Medical department	125,000.00	118,578.95	6,426.05
Repairs	30,000.00	14,413.27	15,586.73
Contingent	35,000.00	33,039.38	1,960.62
Naval Hospital fund	40,000.00	40,000.00	.....
Marine Corps:			
Pay	1,706,504.23	1,368,881.84	337,622.89
Clothing	290,199.54	266,226.31	23,973.23
Provisions	371,071.50	193,763.77	177,307.73
Fuel	30,000.00	29,510.78	489.22
Repairs of barracks	29,000.00	23,570.90	5,429.10
Military stores	46,297.00	29,303.80	16,993.20
Transportation and recruiting	70,000.00	35,675.69	34,324.31
Forage	6,000.00	2,720.33	3,279.67
Hire of quarters	18,548.00	17,477.29	1,070.71
Contingent	96,389.39	76,549.35	19,840.04
	42,184,895.99	30,137,169.75	12,047,726.24

THE PROBATIONARY SYSTEM.

During the past year the probationary system, as applied to naval prisoners, has been given a trial in cases where a man's general record, aside from the particular offense or offenses for which he has undergone trial, has presented meritorious features, the practice has been to direct that the sentence imposed, in whole or in part, be held in abeyance and the prisoner restored to duty on probation, full reports respecting his conduct during the term of such probation being made. The practical operation of this plan has proved satisfactory, and it will be continued.

LEGISLATION RECOMMENDED.

Section 3648 of the Revised Statutes forbids the "advance of public money" in any case whatever. The Comptroller of the Treasury and the Paymaster-General of the Navy unite in urging such modification of this provision of law as will permit advance payments to be made in cases where required by commercial usage. It has been found in practice that the statute as it stands sometimes interposes a bar to the prompt procurement by the Government of certain services, such as expressage, the furnishing of light and water for public buildings, telephone service, and subscriptions to daily, weekly, and monthly publications. Persons furnishing these things frequently decline to supply them to the Government on a different basis from that on which they are obtained by their individual patrons. It is urged that "the Government should accommodate itself and its laws to the business laws and usages of trade when it enters the field of trade." Believing that the modification of existing law necessary to avoid the practical inconveniences complained of could be safely made, the Department concurs in the recommendation that Congress be asked to amend section 3648 as suggested.

Among the recommendations of the Judge-Advocate-General which receive the approval of the Department are:

1. The enactment of a measure providing for the use of depositions before naval courts-martial and courts of inquiry. A bill conferring such authority (S. 1103) passed the Senate on the 3d of March last.

2. The simplification of the procedure of naval examining and retiring boards by consolidating their functions, as proposed in measures now pending in the Senate (S. 64) and in the House of Representatives (H. R. 8120). The proposed change, the several features of which have been suggested by the operation of the present systems of examination and retirement in the Army and the Navy, respectively, would result in material advantage to the service.

3. The passage of a measure making provision for convening general courts-martial in the island possessions of the United States. The need for this legislation is the outgrowth of new conditions arising since 1898. A measure (S. 1102) authorizing the President to empower commanding officers of naval stations in the island possessions of the United States to convene general courts-martial was introduced in the Senate and passed by that body on the 3d of March last.

THE MARINE CORPS.

I take pleasure in making reference to the prompt response of the Marine Corps on more than one occasion during the year to urgent demands of the service. In one instance, upon telegraphic instructions,

a battalion, fully organized, armed, and equipped with supplies of all kinds, including arms, ammunition, rations, tents, camp equipage, implements, etc., was assembled at League Island, Pa., ready for embarkation within seventy-two hours after the receipt at headquarters of the order, and twenty-four hours before the expiration of the time fixed therein. This is in keeping with the traditional readiness of the organization to answer at the shortest notice calls made upon it for active duty.

TUTUILA AND GUAM.

Since the acquisition of these islands no action has been taken by Congress to establish civil government within their limits or to provide revenues for its maintenance. Such action is necessary to the peace and well-being of the islands, and is earnestly recommended.

I can not close this report without acknowledging the sympathy, cooperation, and aid which I have received from the Admiral of the Navy. As president of the General Board of the Navy his services have been of great value to the Department and the fleet. The security of his own fame has not lessened his interest in the service or diminished his effort for its improvement. His zealous earnestness in the cause is the good fortune of the Department, and gives him an added title to the favor of the nation.

WILLIAM H. MOODY,
Secretary of the Navy.

SECRETARY'S OFFICE, ESTIMATES, PROPOSALS, AND CONTRACTS.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, by the Navy Department.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1904.
PAY OF THE NAVY.			
Pay and allowances prescribed by law of officers on sea duty; officers on shore and other duty; officers on waiting orders; officers on the retired list; clerks to commandants of yards and stations; clerks to paymasters at yards and stations; general storekeepers, receiving ships, and other vessels; commutation of quarters for officers on shore not occupying public quarters, including boatswains, gunners, carpenters, sailmakers, warrant machinists, pharmacists, and mates; pay of enlisted men on the retired list; extra pay to men reenlisting under honorable discharge; interest on deposits by men; pay of petty officers, seamen, landsmen, and apprentices, including men in the engineers' force and men detailed for duty with naval militia, 25,500 men and 2,500 apprentices under training at training stations and on board training ships, at the pay prescribed by law (R. S., p. 246, sec. 1367; p. 248, secs. 1386-1388; p. 265, sec. 1556; p. 269, sec. 1569; p. 269, sec. 1573; p. 272, sec. 1595. Acts May 12, 1879, vol. 21, p. 3, sec. 1; Aug. 5, 1882, vol. 22, pp. 285-287, sec. 1; Mar. 3, 1883, vol. 22, pp. 472-473, sec. 1; Mar. 3, 1885, vol. 23, p. 340, sec. 1; Mar. 2, 1889, vol. 25, p. 809, sec. 1; July 12, 1892, vol. 27, p. 236, sec. 1; July 26, 1894, vol. 28, pp. 123-127, sec. 1; Apr. 29, 1896, vol. 29, p. 97, sec. 2; June 10, 1896, vol. 29, p. 361, sec. 1; May 4, 1898, vol. 30, p. 369-370, sec. 1; Mar. 3, 1899, vol. 30, p. 1004, secs. 1-26; Mar. 3, 1899, vol. 30, p. 1024, sec. 1; June 7, 1900, vol. 31, p. 684, sec. 1; Mar. 3, 1901, vol. 31, p. 1107, sec. 1; July 1, 1902).....		\$17, 106, 099	\$16, 138, 199
NOTE.—The foregoing estimate is made up as follows:			
Pay of 2,215 officers on the active list now allowed by law.....	\$5, 176, 805		
Commutation of quarters for officers.....	200, 000		
Pay of 497 midshipmen under instruction.....	248, 500		
Pay of 586 officers on the retired list.....	1, 427, 766		
Extra pay of 81 retired officers performing active duty.....	36, 786		
Pay of 157 clerks now allowed by law (R. S., sec. 1556).....	197, 400		
Pay of 25,500 petty officers, seamen, and other enlisted men.....	9, 180, 000		
Pay of 2,500 apprentice boys at training stations and on board training ships.....	270, 000		
Pay of enlisted men on the retired list.....	71, 892		
Extra pay of petty officers and seamen reenlisting under honorable discharge.....	184, 450		
Allowances to graduates of gun captains', seaman gunners', and petty officers' schools.....	20, 000		
Allowances to men holding good conduct medals.....	76, 500		
To pay interest on deposits by enlisted men (act Feb. 9, 1889).....	16, 000		
Total.....	17, 106, 099		
NOTE.—For detailed estimate of officers, etc., of the Navy, see Appendix.			

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the Navy Department—Continued.*

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1904.
PAY, MISCELLANEOUS.			
For commissions and interest; transportation of funds; exchange; mileage to officers while traveling under orders in the United States, and for actual personal expenses of officers while traveling abroad under orders, and for traveling expenses of civilian employees, and for actual and necessary traveling expenses of naval cadets while proceeding from their homes to the Naval Academy for examination and appointment as cadets; for rent and furniture of buildings and offices not in navy-yards; expenses of courts-martial, prisoners and prisons, and courts of inquiry, boards of inspection, examining boards, with clerks' and witnesses' fees, and traveling expenses and costs; stationery and recording; expenses of purchasing-paymasters' offices of the various cities, including clerks, furniture, fuel, stationery, and incidental expenses; newspapers and advertising; foreign postage; telegraphing, foreign and domestic; telephones; copying; care of library, including the purchase of books, photographs, prints, manuscripts, and periodicals; ferriage, tolls, and express fees; costs of suits; commissions, warrants, diplomas, and discharges; relief of vessels in distress; recovery of valuables from shipwrecks; quarantine expenses; reports; professional investigation; cost of special instruction, at home or abroad, in maintenance of students and attaches and information from abroad, and the collection and classification thereof, and other necessary incidental expenses (act July 1, 1902)	\$600,000	\$600,000	\$600,000
CONTINGENT, NAVY.			
All emergencies and extraordinary expenses arising at home or abroad, but impossible to be anticipated or classified, exclusive of personal services in the Navy Department or any of its subordinate bureaus or offices at Washington, D. C. (act July 1, 1902)		10,000	10,000
EMERGENCY FUND, NAVY DEPARTMENT, 1904.			
To meet unforeseen contingencies for the maintenance of the Navy constantly arising, to be expended at the discretion of the President (act July 1, 1902)		100,000	100,000
SALARIES, OFFICE OF SECRETARY OF THE NAVY.			
Secretary (appropriated; act Apr. 28, 1892)	\$8,000		
Assistant Secretary (same act)	4,500		
Chief clerk (same act)	3,000		
Clerk to Secretary (same act)	2,250		
Disbursing clerk (same act)	2,250		
Four clerks of class 4 (same act)	7,200		
One stenographer (same act)	1,800		
One clerk of class 3 (same act)	1,600		
One clerk of class 2 (same act)	1,400		
One clerk of class 2 (in lieu of one clerk of class 4) (submitted)	1,400		
Four clerks of class 1 (act Apr. 28, 1902)	4,800		
Two clerks at \$1,000 each (same act)	2,000		
Telegraph operator (same act)	1,000		
Carpenter (same act)	900		
Three messengers at \$840 each (same act)	2,520		
One messenger at \$840 (in lieu of assistant messenger) (submitted)	840		
Four assistant messengers at \$720 each (act Apr. 28, 1902) ..	2,880		
Four laborers at \$660 each (same act)	2,640		
		50,980	51,260
CONTINGENT EXPENSES, NAVY DEPARTMENT.			
Stationery, furniture, newspapers, plans, drawings, drawing materials, horses and wagons to be used only for official purposes, freight, expressage, postage, and other absolutely necessary expenses of the Navy Department and its various bureaus and offices (act of Apr. 28, 1902) ..		12,000	12,000

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the Navy Department—Continued.*

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1904.
BUILDING FOR NAVY DEPARTMENT, RENT, EMPLOYEES, ETC.			
For the rent of a suitable fireproof building in the vicinity of the State, War, and Navy Department building for the use of the Navy Department for the period of 10 years, at an annual rental of not exceeding \$24,500 (act July 1, 1902)	\$24,500		
Fuel, light, and miscellaneous articles (same act)	4,700		
Assistant engineer, at the rate of \$1,000 per annum (same act)	1,000		
4 firemen, \$720 per annum each (same act)	2,880		
2 elevator conductors, \$720 per annum each (same act)	1,440		
10 charwomen, at the rate of \$240 per annum each (same act)	2,400		
4 laborers, at the rate of \$660 per annum each (same act)	2,640		
5 watchmen, at the rate of \$720 per annum each (same act)	3,600		
1 plumber, at the rate of \$900 per annum (same act)	900		
		\$44,060	\$22,080
PRINTING AND BINDING.			
Printing and binding for the Navy Department, including \$15,000 for the Hydrographic Office, to be executed under the direction of the Public Printer (act June 28, 1902)		145,000	145,000

Estimates of the amount required to pay officers of the United States Navy for the fiscal year ending June 30, 1904.

OFFICERS ON THE ACTIVE LIST.

No.	Grade.	Sea duty.			Shore duty.		
		No.	Pay per annum.	Total.	No.	Pay per annum.	Total.
1	Admiral				1	\$13,500.00	\$13,500.00
12	Rear-admirals (pay of major-general)	5	\$7,500.00	\$37,500.00	7	6,375.00	44,625.00
16	Rear-admirals (pay of brigadier-general)	9	5,500.00	49,500.00	7	4,675.00	32,725.00
1	Rear-admiral (chief of bureau)				1	5,500.00	5,500.00
■	Captains (chiefs of bureaus)				3	5,500.00	16,500.00
81	Captains ^a	35	4,500.00	157,500.00	46	4,165.00	191,590.00
1	Commander (assistant to bureau)				1	4,000.00	4,000.00
128	Commanders ^a	53	4,000.00	212,000.00	75	3,570.00	267,750.00
188	Lieutenant-commanders ^a	115	3,500.00	402,500.00	70	2,975.00	208,250.00
		c 3	3,750.00	11,250.00			
1	Lieutenant (assistant to bureau)				1	2,600.00	2,600.00
184	Lieutenants (after 5 years from date of commission)	135	2,600.00	351,000.00	47	2,200.00	103,400.00
		c 2	2,820.00	5,640.00			
133	Lieutenants (first 5 years after date of commission)	101	2,400.00	242,400.00	32	2,000.00	64,000.00
97	Lieutenants (junior grade)	85	1,800.00	153,000.00	12	1,500.00	18,000.00
253	Ensigns	253	1,540.00	389,620.00			
122	Midshipmen (performing duty at sea)	122	950.00	115,900.00			
15	Medical directors				15	4,165.00	62,475.00
1	Medical Inspector (chief of Bureau)				1	5,500.00	5,500.00
14	Medical Inspectors (commander) ^a	1	4,000.00	4,000.00	7	3,570.00	24,990.00
	Fleet surgeons	b 5	4,400.00	22,000.00			
	Beyond seas (Yokohama)	1	4,000.00	4,000.00			
20	Surgeons (lieutenant commander) ^a	12	3,500.00	42,000.00	7	2,975.00	20,825.00
		c 1	3,750.00	3,750.00			
1	Surgeon (lieutenant—assistant to Bureau)				1	3,500.00	3,500.00
2	Surgeons (lieutenant) (third 5 years)				b 2	3,200.00	6,400.00
10	Surgeons (second 5 years)	b 7	3,200.00	22,400.00	b 3	2,800.00	8,400.00

^a After 20 years' service.

^b Old pay.

^c On shore duty beyond the continental limits of the United States.

Estimates of the amount required to pay officers of the United States Navy for the fiscal year ending June 30, 1904—Continued.

OFFICERS ON THE ACTIVE LIST—Continued.

No.	Grade.	Sea duty.			Shore duty.		
		No.	Pay per annum.	Total.	No.	Pay per annum.	Total.
24	Surgeons (first 5 years).....	b 14	\$2,800.00	\$39,200.00	b 10	\$2,400.00	\$24,000.00
53	Passed assistant surgeons (after 5 years).....	b 28	2,200.00	61,600.00	b 25	2,000.00	50,000.00
31	Passed assistant surgeons (first 5 years).....	b 26	2,000.00	52,000.00	b 5	1,800.00	9,000.00
26	Assistant surgeons (lieutenant, junior grade) (after 5 years).....	15	1,650.00	24,750.00	6	1,402.50	8,415.00
5	Acting assistant surgeons (lieutenant, junior grade) (after 5 years).....	c 5	1,800.00	9,000.00			
1	Pay director (chief of Bureau).....	3	1,650.00	4,950.00	2	1,402.50	2,805.00
12	Pay directors (captains) ^a				1	5,500.00	5,500.00
14	Pay inspectors (commanders) ^a	c 2	4,300.00	8,600.00	12	4,165.00	49,980.00
	Fleet paymasters.....	b 5	4,400.00	22,000.00	6	3,570.00	21,420.00
	Beyond seas (Yokohama).....	c 1	4,000.00	4,000.00			
7	Paymasters (lieutenant-commanders) ^a	4	3,500.00	14,000.00	3	2,975.00	8,925.00
1	Paymaster (lieutenant-commander—assistant to Bureau).....				1	3,500.00	3,500.00
4	Paymasters (second 5 years).....	b 2	3,200.00	6,400.00	2	2,800.00	5,600.00
28	Paymasters (first 5 years).....	b 15	2,800.00	42,000.00	13	2,400.00	31,200.00
30	Passed assistant paymasters (after 5 years).....	b 17	2,200.00	37,400.00	13	2,000.00	26,000.00
23	Assistant paymasters (lieutenants, junior grade, after 5 years).....	18	1,650.00	29,700.00			
17	Assistant paymasters (ensigns, after 5 years).....	c 1	1,800.00	1,800.00	4	1,402.50	5,610.00
21	Chaplains.....	17	1,540.00	26,180.00			
5	Professors of mathematics (fourth 5 years).....	18	2,800.00	50,400.00	6	2,300.00	13,800.00
2	Professors of mathematics (third 5 years).....				5	3,500.00	17,500.00
5	Professors of mathematics (second 5 years).....				2	3,000.00	6,000.00
1	Secretary to Admiral (lieutenant) (after 5 years).....				5	2,700.00	13,500.00
1	Naval constructor (chief of bureau).....				1	2,500.00	2,500.00
1	Naval constructor (fourth 5 years).....				1	5,500.00	5,500.00
5	Naval constructors (third 5 years).....				1	4,000.00	4,000.00
10	Naval constructors (second 5 years).....				5	3,700.00	18,500.00
7	Naval constructors (first 5 years).....				10	3,400.00	34,000.00
11	Assistant naval constructors (second 4 years).....				6	3,200.00	19,200.00
14	Assistant naval constructors (first 4 years).....				c 1	3,520.00	3,520.00
1	Civil engineer (chief of bureau).....				10	2,200.00	22,000.00
4	Civil engineers (fourth 5 years).....				c 1	2,420.00	2,420.00
10	Civil engineers (third 5 years).....				14	2,000.00	28,000.00
12	Civil engineers (second 5 years).....				1	5,500.00	5,500.00
13	Chief boatswains (ensign) (after 20 years).....	9	1,960.00	17,640.00	2	3,500.00	7,000.00
113	Boatswains (after 12 years).....	95	1,800.00	171,000.00	c 2	3,850.00	7,700.00
5	Boatswains (fourth 3 years).....	3	1,600.00	4,800.00	9	3,000.00	27,000.00
5	Boatswains (third 3 years).....	3	1,400.00	4,200.00	c 1	3,300.00	3,300.00
1	Boatswain (second 3 years).....	1	1,300.00	1,300.00	12	2,700.00	32,400.00
8	Chief gunners (ensign) (after 20 years).....	2	1,960.00	3,920.00	4	1,960.00	7,840.00
7	Chief gunners (ensign) (fourth 5 years).....	c 1	2,100.00	2,100.00	18	1,600.00	28,800.00
84	Gunners (after 12 years).....	5	1,820.00	9,100.00	2	1,300.00	2,600.00
20	Gunners (fourth 3 years).....	55	1,800.00	99,000.00	2	1,300.00	2,600.00
14	Chief carpenters (ensign) (after 20 years).....	16	1,600.00	25,600.00			
2	Chief carpenters (ensign) (fourth 5 years).....	6	1,960.00	11,760.00	8	1,960.00	15,680.00
20	Carpenters (after 12 years).....	7	1,800.00	12,600.00	2	1,820.00	3,640.00
19	Carpenters (fourth 3 years).....	10	1,600.00	16,000.00	13	1,600.00	20,800.00
22	Carpenters (third 3 years).....	c 1	1,720.00	1,720.00	8	1,300.00	10,400.00
10	Chief sailmakers (ensign) (after 20 years).....	19	1,400.00	26,600.00	3	1,300.00	3,900.00
		4	1,960.00	7,840.00	4	1,960.00	7,840.00
		c 2	2,100.00	4,200.00			

^a After 20 years service.

^b Old pay.

^c On shore duty beyond the continental limits of the United States.

ESTIMATES, PROPOSALS, ETC., SECRETARY'S OFFICE.

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Estimates of the amount required to pay officers of the United States Navy for the fiscal year ending June 30, 1904—Continued.

OFFICERS ON THE ACTIVE LIST—Continued.

No.	Grade.	Sea duty.			Shore duty.		
		No.	Pay per annum.	Total.	No.	Pay per annum.	Total.
32	Warrant machinists (after 12 years).	28	\$1,800.00	\$50,400.00	3	\$1,600.00	\$4,800.00
		a 1	1,920.00	1,920.00			
78	Warrant machinists (fourth 3 years)	73	1,600.00	116,800.00	5	1,300.00	6,500.00
40	Warrant machinists (third 3 years)	33	1,400.00	46,200.00	7	1,300.00	9,100.00
25	Pharmacists (after 12 years)	6	1,800.00	10,800.00	19	1,600.00	30,400.00
24	Mates (appointed since Aug. 1, 1894)	24	900.00	21,600.00			
2,215		1,540		3,327,040.00	675		1,849,765.00

a On shore duty beyond the continental limits of the United States.

Total sea duty pay	\$3,327,040
Total shore duty pay	1,849,765
Total pay, 2,215 officers	5,176,805

OFFICERS ON THE RETIRED LIST.

Rank.	Num-ber.	Amount.	Rank.	Num-ber.	Amount.
Rear-admirals	44	\$208,125.00	Passed assistant engineers	34	\$55,187.50
Commodores	5	18,750.00	Assistant engineers	29	37,700.00
Captains	30	111,825.00	Chaplains	10	21,875.00
Commanders	38	105,775.00	Professors of mathematics	7	21,375.00
Lieutenant-commanders	26	58,450.00	Naval constructors	7	22,125.00
Lieutenants	51	93,586.00	Civil engineers	5	15,500.00
Lieutenants (junior grade)	10	13,800.00	Chief boatswains	9	13,965.00
Ensigns	16	16,250.00	Boatswains	16	21,600.00
Medical directors	29	106,725.00	Chief gunners	5	7,875.00
Medical inspectors	7	23,625.00	Gunners	24	32,400.00
Surgeons	18	42,195.00	Chief carpenters	3	4,725.00
Passed assistant surgeons	8	12,900.00	Carpenters	19	25,650.00
Assistant surgeons	6	7,675.00	Chief sailmakers	3	4,515.00
Pay directors	19	73,350.00	Sailmakers	11	12,650.00
Pay inspectors	6	19,950.00	Warrant machinists	2	2,250.00
Paymasters	11	29,875.00	Pharmacists	2	2,700.00
Passed assistant paymaster	1	1,650.00	Mates	20	16,242.72
Assistant paymasters	2	2,025.00			
Chief engineers	53	162,900.00	Total	586	1,427,766.22

Number of clerks and their pay, allowed to commandants of yards and stations, to paymasters of yards, to general storekeepers, and on receiving ships and cruising vessels.

Num-ber.	Designation.	Where employed.	Pay per annum.	Total.
1	First clerk to commandant	Navy-yard, Portsmouth, N. H.	\$1,500	\$1,500
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster of yard	do	1,400	1,400
1	Principal clerk to general storekeeper	do	1,300	1,300
1	First clerk to commandant	Navy-yard, Boston, Mass.	1,500	1,500
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster of yard	do	1,600	1,600
1	Principal clerk to general storekeeper	do	1,600	1,600
1	Clerk to paymaster of receiving ship	do	1,600	1,600
1	First clerk to commandant	Navy-yard, New York, N. Y.	1,500	1,500
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster of yard	do	1,600	1,600
1	Principal clerk to general storekeeper	do	1,600	1,600
1	Clerk to paymaster of receiving ship	do	1,600	1,600
1	First clerk to commandant	Navy-yard, League Island, Pa.	1,500	1,500
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster of yard	do	1,600	1,600
1	Principal clerk to general storekeeper	do	1,600	1,600
1	Clerk to paymaster of receiving ship	do	1,600	1,600
1	First clerk to commandant	Navy-yard, Norfolk, Va.	1,500	1,500
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster of yard	do	1,400	1,400

Number of clerks and their pay, allowed to commandants of yards and stations, to paymasters of yards, to general storekeepers, etc.—Continued.

Number.	Designation.	Where employed.	Pay per annum.	Total.
1	Principal clerk to general storekeeper..	Navy-yard, Norfolk, Va	\$1,300	\$1,300
1	Clerk to paymaster of receiving ship ..	do	1,300	1,300
1	First clerk to commandant	Navy-yard, Washington, D. C.	1,500	1,500
2	Second clerks to commandant	do	1,200	2,400
1	Clerk to paymaster of yard	do	1,600	1,600
1	Principal clerk to general storekeeper..	do	1,600	1,600
1	First clerk to commandant	Navy-yard, Pensacola, Fla	1,500	1,500
1	Clerk to paymaster of yard	do	1,400	1,400
1	First clerk to commandant	Navy-yard, Mare Island, Cal.	1,800	1,800
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster of yard	do	1,800	1,800
1	Principal clerk to general storekeeper..	do	1,300	1,300
1	Clerk to paymaster of receiving ship ..	do	1,800	1,800
1	Clerk to commandant	Naval station, New London, Conn.	1,500	1,500
1	Clerk to paymaster of station	do	1,300	1,300
1	Clerk to commandant	Training station, Newport, R. I.	1,500	1,500
1	Clerk to paymaster of receiving ship ..	do	1,300	1,300
1	Clerk to general storekeeper	do	1,300	1,300
1	Clerk to paymaster of station	Torpedo station, Newport, R. I.	1,300	1,300
1	Clerk to commandant	Naval station, Key West, Fla.	1,500	1,500
1	Clerk to paymaster of station	do	1,300	1,300
1	Clerk to commandant	Naval Academy, Annapolis, Md.	1,500	1,500
1	Clerk to cadet storekeeper	do	1,300	1,300
1	Clerk to general storekeeper	do	1,300	1,300
1	Clerk to commissary	do	1,300	1,300
1	Clerk to paymaster of Academy	do	1,300	1,300
1	Clerk to paymaster of ships	do	1,300	1,300
1	Clerk to commanding officer	Naval Home, Philadelphia, Pa.	1,500	1,500
1	Clerk to paymaster	do	1,300	1,300
1	Clerk to general inspector, Pay Corps ..	do	1,300	1,300
1	Clerk to commandant	Navy-yard, Puget Sound, Wash.	1,500	1,500
1	Second clerk to commandant	do	1,200	1,200
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Training station, Port Royal, S. C.	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Naval station, Charleston, S. C.	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to paymaster	Naval proving grounds	1,300	1,300
1	Clerk to commandant	Training station, San Francisco, Cal.	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Naval station, Habana, Cuba	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Naval station, San Juan, P. R.	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Naval station, Cavite, P. I.	1,500	1,500
1	Clerk to paymaster	do	1,300	1,300
1	Clerk to general storekeeper	do	1,300	1,300
1	Clerk to governor	Naval station, Island of Guam ...	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Naval station, Honolulu, Hawaii.	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
1	Clerk to commandant	Naval station, Tutuila, Samoa	1,500	1,500
1	Clerk to paymaster and general storekeeper.	do	1,300	1,300
5	Clerks to paymasters of flagships	do	1,100	5,500
19	Clerks to paymasters of first-rate ships..	do	1,300	24,700
28	Clerks to paymasters of second-rate ships	do	1,100	30,800
29	Clerks to paymasters of third-rate ships.	do	1,000	29,000
157	Total	do		197,400

The expense of advertising the above-mentioned vessels was \$326.53, and the proceeds arising from their sale, after deducting said expense, amounted to \$57,555.47, which sum has been covered into the Treasury as miscellaneous receipts, on account of "proceeds of Government property," in accordance with section 3618 of the Revised Statutes.

Respectfully submitted.

B. F. PETERS, *Chief Clerk.*

The SECRETARY OF THE NAVY.

RECEIPTS FROM SALES OF GOVERNMENT PROPERTY.

Statement of deposits on account of sales of Government property, Navy Department, from November 1, 1901, to October 31, 1902.

[Compiled in the office of Auditor for Navy Department, by direction of the Secretary of the Treasury.]

Date of deposit.	Place where deposited.	By whom deposited.	Nature of property sold.	Amount carried to miscellaneous receipts.	Amount credited to appropriations.	Total amount deposited.
1901.						
Oct. 19	Washington, D. C.	Stickney, F. H., disbursing clerk	Plate ink to Hydrographic Office		\$37.50	\$37.50
23	do	Denny, F. L., quartermaster	Deserters' clothing	\$3.15		3.15
14	New York	Skelding, H. T., paymaster	Tobacco sold to marines		10.73	10.73
29	do	Boggs, L. G., pay inspector	Material furnished and docking the Russian battleship Retvizan.	1,682.04	705.29	2,387.33
30	do	do	Fuel sold officers		89.85	89.85
24	do	do	Scrap iron, railroad iron, etc	3,160.27		3,160.27
Nov. 1	Boston	Thaxter, S., & Son	Nautical books and charts		95.88	95.88
1	Washington, D. C.	Todd, C. C.	do		879.63	879.63
1	do	Nautical Almanac Office	Nautical almanacs		244.60	244.60
4	New Orleans	Frigerio, Louis, widow of	Nautical books and charts		7.35	7.35
1	New York	Boggs, L. G., pay inspector	Table linen furnished Mr. Lewis Nixon, of Crescent shipyard.		52.95	52.95
6	do	Rose, W. V. H., passed assistant paymaster.	Fuel to officers, work done in machine shops, water sold, and use of cable.		104.18	104.18
6	Baltimore	Goldsbrough, W., pay inspector	Fuel to officers		176.34	176.34
1	San Francisco	Brooks, J., assistant paymaster	Clothing to McCulloch		699.64	699.64
6	Norfolk, Va.	Galt, W. W., paymaster	Fuel to officers		41.88	41.88
6	San Francisco	Arnheim, S. S.	Nautical books and charts		52.94	52.94
6	do	do	Nautical Almanacs		6.00	6.00
7	Washington, D. C.	Denny, F. L., quartermaster	Arms and accouterments	.35		.35
5	do	do	Fuel to officers		99.54	99.54
6	do	do	Condemned clothing	5.02		5.02
9	do	do	Forage sold to officers		559.60	559.60
12	New York	Rose, W. V. H., passed-assistant paymaster.	Use of Government cable, provisions furnished Marine Barracks, Dry Tortugas, and water sold at Key West.			
25	Washington, D. C.	O'Neil, C., Chief Bureau Ordnance	Bouncing a 12-inch breech plug for Midvale Steel Co.		574.07	574.07
16	New York	Hydrographic Office	Nautical books and charts		13.44	13.44
18	Washington, D. C.	do	do		679.11	679.11
22	San Francisco	Butler, G. C.	do		88.28	88.28
30	Washington, D. C.	Nautical Almanac Office	Nautical Almanacs		82.75	82.75
15	do	Denny, F. L., quartermaster	Commissary stores furnished marines serving in Philippines.		103.54	103.54
14	do	do	Clothing and furniture	155.27	1,467.41	1,467.41
						155.27

RECEIPTS FROM SALES OF GOVERNMENT PROPERTY.

[illegible]

Statement of deposits on account of sales of Government property, Navy Department, from November 1, 1901, to October 31, 1902—Continued.

Date of deposit.	Place where deposited.	By whom deposited.	Nature of property sold.	Amount carried to miscellaneous receipts.	Amount credited to appropriations.	Total amount deposited.
1901.						
Dec. 27	Washington, D. C.	Frailey, L. A., pay director.	Coal supplied Surg. H. B. Pitts.		\$33.00	\$33.00
28	New York	Boggs, L. G., pay inspector.	Fuel to officers.		121.45	121.45
31	Norfolk, Va.	Galt, W. W., paymaster.	Condemned stores, ordnance material, and clothing.	\$12,120.14	5,098.45	17,218.59
31	do	do	Fuel to officers.		57.69	57.69
31	San Francisco	Weule, L.	Nautical books and charts.		243.80	243.80
31	do	Brooks, J., assistant paymaster.	Repairs and equipment stores to French cruiser Protet.		3,085.22	3,085.22
18	Washington, D. C.	Stickney, F. H., disbursing clerk.	Ink furnished Hydrographic Office.		37.50	37.50
1902						
Jan. 2	New York	Balthis, H. H., passed assistant paymaster.	Fuel to officers.		58.79	58.79
2	Washington, D. C.	Denny, F. L., quartermaster.	do.		209.04	209.04
2	New York	Boggs, L. G., pay inspector.	Clothing to naval militia, New Orleans.		108.90	108.90
7	do	Hydrographic Office.	Nautical books and charts.		49.00	49.00
7	Philadelphia, Pa.	Riggs & Bro.	do.		92.00	92.00
2	San Francisco	Brooks, J., assistant paymaster.	Equipment stores to California naval militia.		55.30	55.30
4	Washington, D. C.	McCawley, acting quartermaster, U. S. Marine Corps.	Condemned clothing and accouterments.	10.60		10.60
4	Baltimore	Goldsborough, W., pay inspector.	Fuel to officers.		191.57	191.57
6	New York	Boggs, L. G., pay inspector.	Work done in machine shops, provisions to officers' messes, sale dead men's effects, fuel to officers, water to contractors.		445.51	445.51
9	Washington, D. C.	McCawley, C. L., acting quartermaster.	Condemned clothing.	22.87		22.87
13	do	do	Bath tubs.	.27		.27
18	do	Titcomb, W. P., disbursing agent.	250 sounding shop, for Albatross.		836.84	836.84
18	Norfolk, Va.	Cunn, J. E., pay inspector.	Steel scrap, engines, etc.	4,024.51		4,024.51
15	Baltimore	O'Neal, M. V.	Nautical books and charts.		147.28	147.28
15	New Orleans	Frigerio & Scully.	do.		67.61	67.61
17	do	Frigerio, Louis, widow of.	do.		10.35	10.35
21	Boston	Thaxter, S., & Son.	do.		167.03	167.03
17	Washington, D. C.	Hydrographer.	do.		838.72	838.72
20	do	McCawley, C. L., acting quartermaster.	Clothing sold officers.		10.51	10.51
11	do	do	do.		50.08	50.08
17	do	Frailey, L. A., pay director.	Received from disbursing agent, Philippine revenues, for instruments and supplies shipped to nautical school at Manila.		1,029.88	1,029.88

RECEIPTS FROM SALES OF GOVERNMENT PROPERTY.

43
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30	do	do	do	do	Accountants, fire hose, etc.	23.40	23.40
17	Norfolk, Va.	Phillips, J. S., paymaster.	do	do	Installation of ship log	51.13	51.13
23	New Orleans	Woodhull, W. W., pay inspector	do	do	Labor, material furnished, and docking steamer for Morgan Line Steamship Co.	99.16	604.30
11	Washington, D. C.	Stickney, F. H., disbursing clerk	do	do	Ink furnished Hydrographic Office.	37.50	37.50
May 6	Boston	Barry, W. W., pay inspector.	do	do	Condemned material, scrap iron, etc.	b 500.00	b 500.00
June 13	do	do	do	do	Condemned material, boats, clothing, etc.	2,417.03	5,000.00
July 10	do	do	do	do	Condemned ordnance material.	1,200.00	1,200.00
31	do	do	do	do	Condemned ordnance material and clothing.	1,009.98	1,009.98
10	do	do	do	do	Condemned canvas scrap, oil barrels, etc.	961.22	961.22
1901.	do	do	do	do	do		
Sept. 18	do	Hendee, G. E., pay director	do	do	Condemned material, scrap iron, etc.	1,200.00	1,200.00
1902.	do	do	do	do	do		
Jan. 16	do	do	do	do	Condemned material, American and Russian tow, etc.	500.00	500.00
Feb. 12	do	do	do	do	Condemned material, hemp, etc.	500.00	500.00
May 25	do	do	do	do	do	930.00	930.00
July 5	Washington, D. C.	Hydrographer.	do	do	Nautical books and charts	408.05	408.05
1	San Francisco	Arnheim, S. S.	do	do	do	40.92	40.92
2	Washington, D. C.	Denny, F. L., quartermaster	do	do	Fuel to officers.	37.84	37.84
3	do	do	do	do	Furniture, clothing, etc.	8.25	8.25
9	do	do	do	do	Clothing sold officers	24.33	24.33
14	do	do	do	do	Military stores, etc.	654.56	654.56
8	New York	Merrill's Sons.	do	do	Nautical books and charts.	20.98	20.98
11	New Orleans	O'Neal, M. V.	do	do	do	3.17	3.17
12	Baltimore	Hydrographer.	do	do	do	33.47	33.47
15	Philadelphia	Riggs & Bro	do	do	do	338.45	338.45
21	New York	Rupp, M., & Co.	do	do	do	88.23	88.23
3	Baltimore	Goldsbrough, W., pay inspector.	do	do	do	153.87	153.87
8	San Francisco	Brooks, J., assistant paymaster	do	do	Fuel to officers.	76.38	76.38
3	do	do	do	do	From Vallejo Ferry Co., use of machinery	30.00	30.00
19	New York	Morse, J. W., passed assistant paymaster.	do	do	Refuse from brass foundries	806.83	806.83
15	do	do	do	do	Tobacco to marines	23.65	23.65
15	Washington, D. C.	Boggs, L. G., pay inspector.	do	do	Clothing issued Naval Reserves of Rhode Island.	178.81	178.81
19	do	Heap, S. L., paymaster	do	do	Alcohol barrels	1,310.00	1,310.00
22	San Francisco	Denny, F. L., quartermaster	do	do	Use of crane	9.60	9.60
23	Washington, D. C.	do	do	do	Fuel to officers	6.75	6.75
7	New York	Rose, W. V. H., passed assistant paymaster.	do	do	Stoves, helmets, and clothing	10.30	10.30
25	do	do	do	do	Clothing issued Bache, and use of tools	20.41	66.93
31	Portsmouth, N. H.	Lukesh, G. M., passed assistant paymaster.	do	do	Fresh water, provisions to marines, and provisioner to commandant, Habana.	18.75	35.18
28	New York	Boggs, L. G., pay inspector.	do	do	Fresh water to contractors	11.57	11.57
17	Seattle, Wash	Morris, C., jr., passed assistant paymaster.	do	do	Fuel to officers	17.89	17.89
28	Washington, D. C.	Hydrographer.	do	do	Clothing to steamer Gedney	275.68	275.68
					Nautical books and charts	368.68	368.68

^a Sale not completed until June, 1902.

^b May 28, 1902, and these amounts, though deposited in September, 1901, January, February, March, May, June, and July, 1902, the final disposition of the money had not been determined.

REPORT OF THE SECRETARY OF THE NAVY.

Statement of deposits on account of sales of Government property, Navy Department, from November 1, 1901, to October 31, 1902—Continued.

Date of deposit.	Place where deposited.	By whom deposited.	Nature of property sold.	Amount carried to miscellaneous receipts.	Amount credited to appropriations.	Total amount deposited.
1902.						
July 28	New York	Negus, T. S.	Nautical books and charts.		\$230.45	\$230.45
Aug. 1	Washington, D. C.	Denny, F. L., quartermaster	Clothing to officers.		71.99	71.99
4	do	do	Fuel to officers.		40.78	40.78
6	do	do	Cart horse.	\$3.45		3.45
8	do	do	Clothing.	1.80		1.80
4	Baltimore	Goldsbrough, W., pay inspector.	Fuel to officers.		34.81	34.81
5	New York	Rose, W. V. H., passed assistant paymaster.	Work done in machine shops, fuel to officers, water to contractors, provisions condemned, and use of tools.	180.08	318.79	498.87
1	San Francisco	Brooks, J., assistant paymaster	Clothing issued to McCulloch.		249.98	249.98
15	New York	Boggs, L. G., pay inspector.	Clothing issued to storekeeper, Annapolis.		360.80	360.80
9	do	do	Clothing issued to naval brigade, Michigan.		714.16	714.16
1	Washington, D. C.	Director Nautical Almanac	Publications, Nautical Almanac Office.		85.39	85.39
11	Portland, Me.	Sender, Wm., & Co.	Nautical books and charts.		9.40	9.40
8	San Francisco	Arnheim, S. S.	Publications, Nautical Almanac Office.		4.00	4.00
11	do	Butler, G. E.	Nautical books and charts.		85.02	85.02
2	Norfolk, Va.	Phillips, J. S., paymaster.	Coal to officers.		7.00	7.00
13	Washington, D. C.	Denny, F. L., quartermaster	Clothing.	12.98		12.98
23	do	Hydrographer.	Nautical books and charts.		197.92	197.92
26	do	Denny, F. L., quartermaster	Provisions sold from storehouse at Camp Roosevelt, Cullebra.		1,717.47	1,717.47
22	San Francisco	do	Fuel to officers.		14.25	14.25
30	Washington, D. C.	Director Nautical Almanac	Publications Nautical Almanac Office.		191.73	191.73
28	Boston	Barry, W. W., pay inspector.	Material used in repairing training-ship Enterprise.		85.84	85.84
14	New Orleans	Woodhull, W. W., pay inspector	Expenses in docking steamer Huglin.	419.63		419.63
26	do	do	Expenses in docking steamer Chalmette.	897.40		897.40
30	Washington, D. C.	Denny, F. L., quartermaster	Furniture and accouterments.	2.80		2.80
8	New York	Balthus, H. H., passed assistant paymaster.	Material and other charges for docking steamer Mangrove.	23.32		23.32
25	do	Morse, J. W., passed assistant paymaster.	Tobacco to marines.		23.65	23.65
26	do	Boggs, L. G., pay inspector	Refuse wood.	12.00		12.00
28	do	do	Fuel to officers.		12.00	12.00
15	do	do	Materials and repairs and docking Maine.		1,068.57	2,254.59
6	Washington, D. C.	Stickney, F. H., disbursing clerk.	10,000 copies of form and printing of envelopes for Hydrographic Office.	1,186.02	602.95	602.95
16	Erie, Pa.	Redfield, J. B., pay director.	Whaleboat, iron grate, brass, etc.		89.25	89.25
4	Washington, D. C.	Denny, F. L., quartermaster	Fuel to officers.		41.40	41.40
17	do	Hydrographer.	Nautical books and charts.		101.67	101.67
18	Boston	Thaxter & Son.	do.		97.56	97.56

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Oct.

19	San Francisco	Arnheim, S. S.	Publications, Nautical Almanac Office	15.00	15.00
20	Washington, D. C.	Denny, F. L., quartermaster	Condemned furniture	5.47	6.47
18	do	do	Sale of clippings	384.77	384.77
15	New York	Boggs, L. G., pay inspector	Work performed for McClintic Marshall Construction Co.	1.11	1.11
5	Baltimore	Goldsborough, W., pay inspector	Fuel to officers	38.98	38.98
29	Washington, D. C.	Stickney, F. H., disbursing clerk	Hydrographic Office publications	1,184.05	1,184.05
30	Philadelphia	Titcomb, J. B., pay director	Rent of wharf	75.00	75.00
26	Washington, D. C.	Titcomb, W. P., disbursing agent	Coal furnished Albatross	1,063.25	1,063.25
24	New Orleans	Woodhull, W. W., pay inspector	Labor and material and docking Taunton	67.48	228.92
21	San Francisco	Denny, F. L., quartermaster	Fuel to officers	19.50	19.50
23	Washington, D. C.	do	Condemned clothing, bunks, etc	15.98	15.98
30	New York	Morse, J. W., passed assistant paymaster	Tobacco to marines	11.83	11.83
24	do	Boggs, L. G., pay inspector	Table linen to Bath Iron Works	143.59	143.59
37	do	do	Fuel to officers	82.79	82.79
17	Washington, D. C.	Titcomb, W. P., disbursing agent	Coal to Albatross	3,671.07	3,671.07
1	do	Director Nautical Almanac Office	Publications, Nautical Almanac Office	121.75	121.75
2	Baltimore	Goldsborough, W., pay inspector	Fuel to officers	132.35	132.35
4	San Francisco	Weule, L.	Nautical books and charts	160.20	160.20
4	do	do	do	37.48	37.48
6	New York	Arnheim, S. S.	do	170.09	170.09
7	Washington, D. C.	Rupp, M., & Co.	do	171.82	171.82
6	do	Hydrographer	do	66.21	66.21
2	New York	do	do	10.00	10.00
10	Baltimore	Merrill's, R., Sons	do	27.76	27.76
6	Washington, D. C.	O'Neal, M. V.	Coal sold to French gunboat Zelce	707.70	707.70
7	do	Prailey, L. A., pay director	Telephone furnished Arkansas	20.65	20.65
1	do	do	Condemned furniture	1.25	1.25
4	do	Denny, F. L., quartermaster	Condemned accouterments	.72	.72
3	do	do	Fuel to officers	187.52	187.52
9	do	do	Clothing to officers	71.14	71.14
6	New York	Rose, W. V. H., passed assistant paymaster	Provisions, water, use of Government cable, work done, use of tools, etc	277.42	287.83
2	do	Boggs, L. G., pay inspector	Clothing to State National Guard, Louisiana	192.78	192.78
7	do	do	Table linen to Maryland Steel Co.	143.63	143.63
9	Washington, D. C.	Stickney, F. H., disbursing clerk	Electric current, Hydrographic Office	64.32	64.32
13	Portland, Me	Senter, W., & Co	Nautical books and charts	14.30	14.30
	Total			102,199.53	179,307.01
					281,506.54

DETAILED REPORT OF EXAMINATIONS HELD BY NAVY DEPARTMENT AT NAVY-YARDS AND NAVAL STATIONS FOR VARIOUS CIVIL POSITIONS FROM NOVEMBER 8, 1901, TO NOVEMBER, 1902.

	Per diem compensation.	Examination held at—	Number examined.	Passed.	Failed.	Appointed to existing vacancies.	Appointed to subsequent vacancies.
Navy-yard Order No. 255, issued Oct. 21, 1901: 1 draftsman	\$4.00	New York	2	1	1	1	.....
Navy-yard Order No. 256, issued Oct. 25, 1901: 1 marine engine and boiler draftsman.	6.00	Annapolis	3	.....	3	.....	.....
Navy-yard Order No. 257, issued Oct. 29, 1901: 3 subinspectors of concrete	3.04	Boston	11	7	4	3	4
Navy-yard Order No. 258, issued Oct. 29, 1901: 1 electrical draftsman	5.04	Norfolk	1	1	.....	1	.....
Navy-yard Order No. 259, issued Nov. 1, 1901: 1 assistant inspector (Moran Bros., Seattle, Wash.).	5.04	Seattle	5	4	4	1	.....
Navy-yard Order No. 260, issued Nov. 1, 1901: 1 master shipwright	5.52	Puget Sound	3	2	1	1	.....
1 master machinist	5.52	do	4	.....	4	.....	.....
1 master joiner	5.04	do	11	2	9	1	.....
1 master electrician	5.52	do	5	2	3	1	.....
1 foreman laborer	4.48	do	7	3	4	1	.....
1 quartermaster painter in charge	4.48	do	12	1	11	1	.....
1 quartermaster shipsmith in charge	4.48	do	3	1	2	1	.....
1 leadingman molder in charge	4.00	do	2	.....	2	.....	.....
Navy-yard Order No. 261, issued Nov. 2, 1901: 1 assistant electrical draftsman	4.00	New York	1	.....	1	.....	.....
do	3.76	do	3	2	1	2	.....
Navy-yard Order No. 262, issued Nov. 6, 1901: 1 special mechanic	4.00	Boston	5	4	1	1	.....
Navy-yard Order No. 263, issued Nov. 18, 1901: 1 marine engine and boiler draftsman.	6.00	Annapolis .....	.....	.....	.....	.....	.....
Navy-yard Order No. 264, issued Nov. 29, 1901: 1 master ship fitter	5.04	League Island	6	2	4	1	1
Navy-yard Order No. 265, issued Dec. 3, 1901: 1 assistant inspector of engineering material (chemist), office of naval inspector of engineering material, Munhall.	5.04	Munhall, Pa.	14	5	9	1	.....
Navy-yard Order No. 266, issued Dec. 3, 1901: 1 subinspector of buildings (Sangle Point coaling plant, Manila).	5.04	Washington	28	6	22	1	1
Navy-yard Order No. 267, issued Dec. 10, 1901: 1 ship draftsman in charge	7.04	Mare Island	1	1	.....	1	.....
Navy-yard Order No. 268, issued Dec. 13, 1901: 1 master machinist	6.00	Boston	8	5	3	1	1
Navy-yard Order No. 269, issued Dec. 16, 1901: 1 master shipsmith (Cavite, P. I.).	6.00	Mare Island	1	1	.....	1	.....

REPORT

OF THE

JUDGE-ADVOCATE-GENERAL OF THE NAVY.

NAVY DEPARTMENT,
OFFICE OF THE JUDGE-ADVOCATE-GENERAL,
Washington, October 1, 1902.

SIR: Pursuant to the Department's order of the 3d of July last, I have the honor to submit herewith a report of the operations of this office for the fiscal year ending June 30, 1902, together with the estimates for the next fiscal year.

INCREASE OF BUSINESS.

During the year there was, it is found, an increase of 12.2 per cent in the regular business of the office, exclusive of summary court-martial cases, over that of last year, which showed an enlargement of 24 per cent, as compared with the year previous thereto. With the augmentation of the personnel of the Navy and the Marine Corps, the number of general and summary court-martial cases, all of which are received in this office, has materially increased, as shown by the following comparison of the fiscal years 1892-93, to 1901-2, both inclusive.

Court-martial records received.

Year.	General courts.	Summary courts.
1893.....	122	727
1894.....	121	717
1895.....	122	963
1896.....	133	659
1897.....	191	1003
1898.....	219	825
1899.....	216	1,815
1900.....	302	1,462
1901.....	559	2,246
1902.....	660	2,582

Of those received during the last fiscal year 577 general and 2,003 summary court cases required action by the Department.

These figures make clear the fact that, as indicated in former reports, the business of the office is growing steadily as the natural result of conditions heretofore pointed out.

Attention is again invited to the legislation recommended in my annual report for the year 1901, upon the following-mentioned subjects:

CIVILIAN WITNESSES BEFORE NAVAL COURTS.

A bill was introduced in the Senate during the last session (S. 1100) empowering naval courts-martial and courts of inquiry to enforce the attendance before them of civilian witnesses, but no action was taken by that body, the bill not having been reported before adjournment from the Committee on Naval Affairs, to which it had been referred.

DEPOSITIONS.

A measure providing for the use of depositions before naval courts-martial and courts of inquiry, authority for which has frequently been requested heretofore, was introduced in the Senate (S. 1103), passed by that body on the 3d of March last, and by the House referred to its Committee on Naval Affairs, but it was not reported, nor was the bill (H. R. 8117) of similar purport introduced in the House and referred to the same committee reported by it.

NAVAL EXAMINING AND RETIRING BOARDS.

Bills authorizing a change in the present system of organizing examining and retiring boards were introduced in both branches of Congress (S. 64 and H. R. 8120), but neither of them was reported from the Committee on Naval Affairs, to which it was referred.

The necessity for legislation relating to this subject is emphasized by the fact that the number of naval officers is insufficient to meet the demands of the service. The measures proposed would simplify the methods of conducting examinations and reduce the number of officers required for such boards, thus operating advantageously to the Department and to the service generally without increased expense.

GENERAL COURTS-MARTIAL.

A measure authorizing the President to empower commanding officers of naval stations in the island possessions of the United States to convene general courts was introduced in the Senate (S. 1102), and passed by that body on the 3d of March last, and was referred to the Naval Committee of the House, but no action was taken thereon by said committee.

Under the terms of article 38 of the Articles for the Government of the Navy, general courts-martial may be convened only by the President, the Secretary of the Navy, or the commander in chief of a fleet or squadron. Consequently, it is incompetent for the Department to authorize officers of the Navy at naval shore stations in the island possessions of the United States to convene general courts-martial. This inability gives rise to great inconvenience and hinders the administration of justice by necessitating at times long delay in the organization of such courts, while awaiting the uncertain arrival of a commander in chief of a fleet or squadron or the transmission of papers through the mails.

ACQUISITION OF PATENT RIGHTS.

The privilege on the part of the Government of using devices patented to naval officers was provided for in a bill (S. 1104), which passed the Senate on the 11th of April last, and was referred to the

Committee on Naval Affairs of the House, but neither that measure nor the bill (H. R. 7185) of similar purport which was introduced in the House and referred to said committee was reported by it. As has been heretofore pointed out, this matter is one of great importance to the Department.

NAVAL PRISONS.

With the appropriation made prior to the present fiscal year, the capacity of the prison at Boston has been increased so that it will accommodate 150 men with a separate cell for each. This accommodation being inadequate, an appropriation of \$60,000 was, at the suggestion of the Department, made during the past fiscal year, in order that the entire building in which the prison is situated, the other part of which is used as a storehouse and for offices, may be occupied for prison purposes. The Department having concluded, however, that the Boston Navy-Yard is not the best place for a prison, work on the further alteration of this building has been abandoned, and it is understood that by your direction the Bureau of Yards and Docks will estimate for a prison to be located on Seavey Island, Maine, a part of the Portsmouth Navy-Yard reservation. The prison at the Boston Navy-Yard is as it stands, however, a most creditable institution, and, as was ascertained upon my annual visit of inspection, is in an admirably well-disciplined and hygienic condition. The collier *Southery* has been used at this yard to supplement the prison, which could not be filled to its normal capacity while undergoing enlargement, and that vessel will probably be needed for some time yet for the same purpose.

Such arrangements as have been practicable with the money available have been made for the purpose of increasing the capacity of the prison at the navy-yard, Mare Island, Cal., and it now has 38 cells, with an unfinished extension upon which work is suspended for lack of funds, that will, when completed, give 14 additional cells. This is the only prison on the Pacific coast for the confinement of court-martial prisoners, and is, with its limited capacity, inadequate for the purpose.

Under your authority the Bureau of Supplies and Accounts has been directed to supply for the use of prisoners a suitable uniform which will distinguish them from the navy-yard workmen and prevent their wearing the uniform of the Navy or Marine Corps while imprisoned, but will not be of so conspicuous a character as to degrade these men, who, it will be remembered, are as a rule not criminals, but military offenders only, those of the former class being generally sent to State prisons, either at Wethersfield, Conn., or San Quentin, Cal.

The system of probation adopted by the Department having now been in operation during the entire fiscal year, I am able to report its results as follows:

Statement relative to probationers for period from July 1, 1901, to June 30, 1902.

On probation July 1, 1901.....	20
Put on probation during the year	32
Unconditionally restored to duty.....	17
Deserted.....	4
Required to serve sentence.....	5
Discharged as undesirable.....	3
Given "ordinary discharge"	1
Discharged as provided by sentence on account of expiration of enlistment.....	1
Discharged as provided by sentence on account of petty offenses.....	1
On probation June 30, 1902	20

An offender who is sentenced to imprisonment is put on probation only when his case presents some meritorious or extenuating circumstances. This consists in suspending action upon his sentence and allowing him to continue in his regular duties, while monthly reports are made upon him during the time. If he behaves himself for the full extent of his term, he is then unconditionally restored to duty; otherwise he is sent to prison and his sentence enforced.

This privilege is not, except in rare cases, accorded to men convicted of desertion, who are, when so sentenced, almost invariably dishonorably discharged from the service.

It is found that this system is generally beneficial to those that come under its influence, and it is also believed to be valuable to the service. Those on probation are constantly under observation, without the intervention of probation officers as in the States where this practice is followed; their services are not lost to the Government, and they are given an opportunity to redeem themselves. Some, as shown by the foregoing statement, fail to take advantage of the chance for betterment thus held out, but the majority profit thereby, and it is believed that this practice, which is in vogue with good results in a number of the States, is well worth continuing and extending, and it is to be remembered that the service loses nothing on account of backsliders, as they are simply remanded to prison to serve out their original sentences, or, in proper cases, discharged from the service as undesirable.

It is suggested that the commander in chief of the Asiatic Station be advised to adopt the practice, as far as practicable, with men under his control convicted of military offenses and confined therefor in the naval prison at Cavite.

SAM. C. LEMLY,
Judge-Advocate-General.

The SECRETARY OF THE NAVY.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the office of the Judge-Advocate-General, Navy Department.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
<i>Salaries.</i>			
Solicitor.....	\$2,500	.....	.....
Chief clerk.....	2,000	.....	.....
Two clerks of class four.....	3,600	.....	.....
One clerk of class three.....	1,600	.....	.....
One clerk of class two.....	1,400	.....	.....
One clerk of class one.....	1,200	.....	.....
One clerk of class E.....	1,000	.....	.....
One clerk of class D.....	900	.....	.....
One assistant messenger.....	720	.....	.....
Total.....	\$14,920	\$14,920	\$14,860
<i>Books.</i>			
Law books, books of reference, and periodicals of a legal character.....	200	200	.....

NOTE.—By section 3, of the act of March 15, 1898 (30 Stat. L., 316), the purchase of books of the character covered by this item from existing appropriations is prohibited. On account of the peculiar requirements of this office the purchase of publications containing reports of the United States courts, as well as occasional volumes needed for consultation, as new questions arise or as new works are issued, is a practical necessity.

The foregoing estimates for salaries of employees are made upon the assumption that there are to be on duty in this office, as at present, three officers of the Navy or Marine Corps. Should this number be reduced, an increase in the clerical force would be imperatively necessary.

REPORT OF THE JUDGE-ADVOCATE-GENERAL.

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Statement in detail showing the number of persons employed September 1, 1902, in the office of the Judge-Advocate-General under the appropriation "Increase of the Navy," and other general appropriations, submitted in accordance with the requirements of the act of April 17, 1900.

Rating.	Per diem.	Per annum.	Total.
Two clerks, each	\$3.28	\$1,026.64	\$2,053.28
One messenger boy	2.00	626.00	626.00
Total			\$2,679.28

The same number of persons was employed during the fiscal year ending June 30, 1902, but one of those now getting \$3.28 then got \$2.80 per diem.

REPORT

OF THE

CHIEF OF THE BUREAU OF YARDS AND DOCKS.

DEPARTMENT OF THE NAVY,
BUREAU OF YARDS AND DOCKS,
Washington, D. C., November 1, 1902.

SIR: In obedience to the orders contained in the Department's letter of July 3, 1902, I have the honor to submit a report of the operations of the Bureau of Yards and Docks for the fiscal year ended June 30, 1902, accompanied by estimates for its work for the fiscal year ending June 30, 1904.

The expenditures during the year aggregate \$5,634,638.10, of which \$4,359,367.39 was for works of improvement for which specific appropriation was made by Congress. The remainder, \$1,275,270.71, was applied to the maintenance and repair of the navy-yards and stations, for the civil establishment, contingencies, etc., as follows:

The repairs and preservation of the yards and stations cost \$552,823.93; their maintenance, covering outlays for and upon personal property, pay of watchmen, water taxes, etc., cost \$574,345.19; the civil establishment cost \$97,245.67; and contingent and other expenses amounted to \$50,855.92.

Various balances of appropriations remaining after the completion of public works, etc., aggregating \$23,714.12, have been turned into the surplus fund of the Treasury.

The expenditures for improvements were of a varied character, extending to the construction of the five dry docks for the navy-yards at Portsmouth, Boston, League Island, and Mare Island, and the naval station at New Orleans, and to the erection of a large number of shops of modern design and fireproof construction, adapted to the uses of the several bureaus.

Extensive improvements have also been effected in increasing the railroad facilities for the transportation of material and supplies within the yards, the water, electric, and sewerage systems, laying pavements, and erecting quay walls, piers, dredging, and in many other respects. These improvements are greatly enlarging the capacities of the yards and stations and putting them in better condition to meet the needs of the naval service in times of emergency.

These remarks apply especially to the home yards at Portsmouth, Boston, Brooklyn, Norfolk, Mare Island, League Island, and Puget Sound. The stations in the insular possessions have received comparatively moderate outlays, such as were absolutely necessary to keep the works in repair. Few improvements or betterments were undertaken except at Cavite, where the demands resulting from the presence of the large and active force of the Asiatic Station taxed the shore establishment very heavily. The stations in these possessions are not adequate and it would be wise to add to the equipment.

The progress upon the dry docks has not been satisfactory in a single instance. Some special causes have operated which could not be very well avoided, but even where these did not exist the advance in the work has been slow and in some instances exceedingly dilatory. The steel floating dry dock for the naval station at New Orleans has been entirely completed, towed to its destination from Sparrows Point, Md., where built, and subjected to the tests required by the contract by the docking of the battle ship *Illinois*. The dock was accepted and is now in regular use, forming an exceedingly valuable addition to the docking facilities upon this coast, it being one of the two dry docks completed which are capable of docking the largest battle ships.

The steel floating dry dock formerly belonging to the Spanish Government, and acquired by this Government by purchase, was so far repaired and improved at a large expense as to be about ready for use when it met an untoward accident whilst the end pontoons were being docked, the dock breaking badly from the weight of these pontoons being lifted at either end. It is to be towed to the Pensacola Navy-Yard by the Bureau of Construction and Repair, where it will be repaired. The total expenditures in connection with this dock, including its purchase and repair, have up to the present amounted to \$240,557.

The progress upon other works of improvement has not been satisfactory in all instances. Contract work especially is embarrassed by difficulty in procuring some classes of materials and of labor. Supplies are also very tardy in delivery. The congestion in the whole business field of the country affects in a considerable measure the work of the Navy.

Further progress has been made in the installation or enlargement of power plants for the purposes of the Bureau at the most important navy-yards, notably at Portsmouth and Norfolk. The duty upon these plants is increasing constantly, due to the improvement of the yards and the greater activity in all the operations relating to the repairs and supplies for vessels.

Much progress has been made toward providing better and additional berthing accommodations for vessels seeking the yards for repairs and outfit. A marked advantage is realized in this respect at the Boston yard, the acquirement of a large tract of land under water from the State of Massachusetts, which was without cost, having enabled the Bureau to project and construct piers extending outward from the original wharf line over these lands, greatly increasing the number of vessels possible to be brought to the wharves and thereby increasing the amount of work that can be handled at that yard. In the same line is the deep-water basin under construction at Norfolk and which will soon be available in part. Important additional berths are also being made at Mare Island, Cal., and Puget Sound, Wash.

Nearly all the yards have undergone very material and important improvement in the effort to keep pace with the constantly increasing tax upon them growing out of the number of vessels being put afloat.

The Cavite station has continued to perform most important duty in the maintenance of the efficiency of the force upon the Asiatic Station, despite the many drawbacks to its best service. The yard is illy equipped, considering the fact that it is the only one in the Philippines of any importance. Under the emergencies of the service there the greatest efforts have been made to improve conditions, in the absence of any specific appropriations therefor, by the erection of new build-

ings to shelter tools and workmen, repairing and modifying old ones poorly adapted to the work, using from the emergency appropriations, and latterly from the Bureau's repair and maintenance funds. Too much praise can not be accorded to the commandant of the yard, Captain Hanford, for his zeal, untiring efforts, and wise judgment in all matters going to the use of the means at hand and placed at his disposal for the work required of the yard.

The value of the services rendered by this station, and which it must supply for a few years without any doubt, warrants the liberal consideration of the Department and Congress. It will always be a station of importance, and the comparatively moderate sums necessary to make it efficient for the work it now does should be granted. The question of the establishment of another navy-yard of the first magnitude in the vicinity, about 60 miles away, ought not to operate to defeat the supply of these features now requisite. The water supply, fire protection, repairs to wharves, dredging, constructing a few modern buildings, adequate power plant, and quarters sufficient and fit for officers and their families in service there are needed very much indeed. Its geographical position, lying in the port of Manila, will, in all likelihood, lead to its retention.

The losses from fire have been very small during the year, showing a marked exemption as compared with some recent years. A number of incipient fires have occurred, but were discovered and extinguished so promptly as to involve insignificant loss.

Embarrassment has been experienced in conducting the Bureau's work, due to lack of civil engineer officers and draftsmen. A small increase in the former was authorized at the last session of Congress, and when the additional members are obtained the difficulty will be in some measure relieved. With respect to the drafting force, however, it has been impossible to secure the services of a sufficient number of proper qualifications, and much delay occurs in the preparation of plans and specifications for new works, which is further aggravated by the long time consumed in the necessary printing. The public printing is done under great stress as to quantity and time, and as the law does not permit of its being done by private establishments the work must wait. It would be greatly to the advantage of this Bureau if the printing of its specifications for public works could be done by private printers. The beginning of important works is delayed from a few weeks to three months in consequence of the present system.

OPERATIONS FOR THE FISCAL YEAR 1901-1902.

The operations at each navy-yard and station are given in detail under their respective heads.

NAVY-YARD, PORTSMOUTH, N. H.

The expenditures of labor and material during the fiscal year were as follows:

Yard improvements	\$541, 913. 06
Repairs and preservation	52, 613. 13
Maintenance	49, 726. 67
Civil establishment	8, 207. 16
Contingent	6, 082. 69
Total	658, 542. 71

YARD IMPROVEMENTS.

Sawmill for construction and repair, act of March 3, 1899, \$30,000.—The greater part of the work on this building was completed at the beginning of the fiscal year, and was carried on to entire completion June, 1902, at a total cost of \$29,999.97.

Electric-light plant, act of March 3, 1899, \$50,000.—The electric-light plant was installed and as much wiring done around the yard as was necessary to take the place of the old gaslighting system. This work was completed July, 1901, \$49,875.20 being expended on the work.

Remodeling building No. 42, for yards and docks, act of June 7, 1900, \$6,000.—The alteration to this building was intended only to be sufficient to permit the use of the first floor as a workshop, and was completed September, 1901, and the appropriation entirely expended.

Repairing reservoir and cleaning ponds, act of March 3, 1901, \$2,000.—This appropriation was used for repairs to the reservoir in the south end of the yard, thus securing a thoroughly water-tight reservoir at a cost of \$1,999.07, the work being completed during the month of March, 1902.

Improvements to ordnance building No. 22, act of March 3, 1901, \$10,850.—The work of laying the new floor, building bulkheads, repairing floors and partitions, piping the building for a hot water heating system, and the placing of new plumbing in the building was entirely completed in May, 1902. The total cost of the work done under this appropriation was \$10,849.82.

Tools for yards and docks, act of March 3, 1901, \$2,000.—Under this appropriation an expenditure of \$1,990.20 was made for tools, and during the month of June, 1902, the tools were installed in the joiner and machine shops.

Elevator, shelves, etc., for yard dispensary, act of March 3, 1901, \$500.—A dumb waiter, glass and metal shelves, and miscellaneous additions to the building were made under this appropriation, and finished in June, 1902, at a cost of \$492.84.

Specifications and proposals for removing Hendersons Point, act of March 3, 1901, \$1,000.—This work was entirely completed in November, 1901, and \$969.90 of the appropriation was expended.

Dry dock, acts of May 4, 1898, March 3, 1899, January 25, 1900, June 7, 1900, and March 3, 1901.—The work has progressed with considerable advancement during the fiscal year, although there have been delays, and a suspension during the winter months. About 91 per cent of the excavation has been done. The concreting of the floor and under the lower altars has been carried on, and 34 per cent of the entire amount of concrete put in place. The work of cutting and preparing the stone lining was somewhat delayed on account of not obtaining stone of proper size, and of an insufficient number of stonecutters. The setting of the stone lining has progressed quite rapidly during the last three months of the fiscal year and 33 per cent is now in place. The boiler house and stack were pushed rapidly, the stack being completed in November, and the pump house, with the exception of hanging the doors, painting, and concreting the floor, was completed at the end of the fiscal year. Six boilers have been set. About 55 per cent of the work under these appropriations has been done; \$245,079.42 have been expended during the fiscal year, making a total expenditure of \$571,030.54.

Dry-dock pumping plant, improvements, act of June 7, 1900, \$2,165.—This work is about completed, and was done by the construction and repair department. Two thousand and twenty-three dollars and forty-six cents has been expended to date, of which \$1,375.61 was applied this year.

Electric-light plant, to complete, act of June 7, 1900, \$7,000, and electric-light plant, extensions, act of March 3, 1901, \$5,000.—Work under these appropriations consisted of a general extension of the electric-light system of the yard, and at the end of the present fiscal year there are in service in the yard 74 arc lamps and 654 incandescent lamps. Up to the present time \$11,789.68 has been utilized, \$5,277.99 being applied this year.

Equipment shop, act of June 7, 1900, \$85,000.—Under this item there was built a temporary wooden building with an annex by the yard force, and a contract has been entered into with Cotton Bros. & Co. for the construction of a three-story brick building on concrete foundation about 63 feet wide and 207 feet long, with a boiler annex about 26 by 38 feet. From this appropriation there has been expended to date \$8,832.45, of which \$7,839.73 was applied this year.

Coal shed and appliances, act of June 7, 1900, \$40,000.—Work under this item consisted of preparatory surveys for the selection of a location for a complete coaling plant, additional appropriation for which has subsequently been made. The total expense this year has amounted to \$279.61.

Ordnance shop and magazine building, act of June 7, 1900, \$80,000.—Contract was entered into with W. R. Nichols for the construction of two brick buildings under this item, each to be 50 by 150 feet, and on June 30, 1902, this work was estimated to be 90 per cent completed. Up to the present time a total of \$37,501.92 has been expended, \$36,006.72 being applied this year.

Sick quarters, act of March 3, 1901, \$7,000.—The contract for this work called for the erection of a frame building about 27 feet wide and 73 feet long on concrete foundation, and at the end of the present fiscal year this work was estimated to be about 75 per cent completed. All of the expenditure, \$3,091.86, from this appropriation was made this year.

Joiner shop for construction and repair, act of March 3, 1901, \$70,000.—Under date of March 26, 1902, a contract was entered into with the Puget Sound Bridge and Dredging Company for the construction of a three-story brick building on concrete foundation, extending 10 feet below the elevation of the dock coping, the dimensions being about 208 by 72 feet. On June 30, 1902, the foundations were completed and ready for the brickwork. The only expenditures were made during the present year and amounted to \$4,505.98.

Machinery for carpenter and joiner shop, act of March 3, 1901, \$3,000.—Several machines have been purchased and will soon be delivered under this item, \$109.40 having been expended this year.

Extension of dry dock boiler plant, act of March 3, 1901, \$20,000.—Under this item a contract was made for the erection of an extension to the dry dock pump house of dimensions about 43 by 50 feet, and a contract with Henshaw, Bulkley & Co. for furnishing and installing two 280-horsepower boilers of the water-tube Cahill type, with feed pump, heater, and other accessories. On June 30, 1902, the boilers were in place, but the work had not been entirely completed. The

total amount, \$7,313.35, expended from the appropriation has been made during the present year.

Stable and tool shed, act of March 3, 1901, \$6,500.—The contract for the erection of a two-story frame building, with an L and annex, was completed on May 19, 1902, but the electric wiring has not yet been completed. During this year \$5,813.88 has been expended.

Telephone-system extensions, act of March 3, 1901, \$3,000.—Under this item there have been purchased 30 telephones and some other equipment. There was expended on the work during this year \$1,959.69.

Railroad and equipment extension, act of March 3, 1901, \$2,000.—Under this appropriation some track material, a 10-foot turntable, and 3 push cars were purchased, utilizing \$1,780.16 of the appropriation.

Clearing and stumping, act of March 3, 1901, \$5,000.—During this year \$3,158.86 was expended from this appropriation for various improvements in the yard.

Water-closets and wash room for steam engineering, act of March 3, 1901, \$2,000.—This structure, which is octagonal in shape, with brick walls, was finished January 11, 1902, some additional plumbing, however, being necessary. During this year \$1,556.44 was utilized.

Floor for steam-engineering shop, act of March 3, 1901, \$10,000.—Of this appropriation, \$9,698.32 was expended during the present year, and the floor was completed sufficiently for present uses on January 20, 1902.

Carpenter and joiner shop for yards and docks, act of March 3, 1901, \$10,000.—The contract was made for the erection of a one-story brick building with wooden roof trusses and tin roof 151 by 50 feet, and it was completed on January 12, 1902, using \$9,966.20 of the appropriation.

Steam engineering shop and boiler house.—Under this appropriation \$193.35 was used this year for closing the ventilators in the top of this building to protect the machinery.

NAVAL STATION, SAN JUAN, P. R.

The expenditures of labor and material during the fiscal year were as follows:

Yard improvements.....	\$17,659.74
Repairs and preservation.....	12,742.07
Maintenance.....	11,803.33
Civil establishment.....	1,104.00
Total.....	43,309.14

YARD IMPROVEMENTS.

Pier, act of June 7, 1900.—This pier was entirely completed May 31, 1902. The expenditures for the year were \$10,410.04, making the total cost to completion \$14,746.92.

Coaling facilities, acts of June 7, 1900, and March 3, 1901.—Under this appropriation a 100-horsepower boiler was purchased and installed and plans made for a pier. This work would have been further advanced had its location not been delayed awaiting the probable addition of lands to the station. The expenditure for the year was \$2,684.64. The total expenditures have been \$2,712.

Dredging, act of June 7, 1900.—The actual work of dredging was not begun until the last week of the fiscal year, owing to necessary repairs to the dredging machinery. Coal has been purchased, and the work is now well under way and will be continued to completion. The expenditures under this appropriation have been \$432.95.

Electric-light plant, act of June 7, 1900.—At the beginning of the year two generating sets and some supplies had been delivered and some wiring done. During the year the generating sets and switch-board were installed and incidental work in connection therewith completed. Expenditures for the year were \$781.86. The total expenditures to date have been \$4,758.10.

Since the close of the fiscal year possession has been taken of lands immediately adjacent to the naval station for coaling-station purposes, under Executive order of August 20, 1901. Other lands upon the peninsula have been transferred by the War Department.

A question has arisen in regard to whether the title to certain of the lands is in the United States or the insular government, and the use of the same is in consequence in abeyance.

NAVAL STATION, HONOLULU, HAWAII.

The expenditures of labor and material during the fiscal year were as follows:

Yard improvements	\$16, 210. 47
Repairs and preservation	809. 06
Maintenance	5, 649. 98
Civil establishment	556. 00
Contingent	1, 902. 90
Total	25, 128. 41

YARD IMPROVEMENTS.

The station at Honolulu has received a few improvements in its condition by the extension of the office building, the construction of a watchmen's quarters, a small pipe system for the distribution of water from the artesian well upon the property, and for grading, paving, and fencing. This small station performs an important office, and many requisites for a call station for vessels exist, but these are deferred awaiting their establishment at Pearl Harbor, so much better adapted in its harbor and site for the station which must be, sooner or later, erected in Hawaii.

An expenditure was made in the way of conducting surveys, borings, and the examinations at Pearl Harbor, preliminary to its improvement.

Extending office building.—Contract for this work was made in October, 1901, and the entire work of improvement completed during the fiscal year. The total cost of the work was \$2,999.55.

Watchman's cottage.—An appropriation of \$2,500 was made for this improvement. Contract was made, and a six-room cottage erected at a cost of \$2,037. Subsequently this cottage was assigned to the carpenter on duty at the station, and a small cottage for the use of the watchman was erected and paid for from the remainder of the appropriation. The total expenditure was \$2,491.07.

Water-pipe system.—The water system of the station was extended and several small improvements made. The expenditure amounted to \$996.87.

Grading and fencing, appropriation \$10,000.—The fencing of the station has been practically completed, the grading entirely finished and almost entirely sodded. Curbstones have been set, all streets macadamized, and a quantity of concrete walks and sidewalks put down. The total expenditures have been \$7,685.98.

NAVAL STATION, TUTUILA, SAMOAN ISLANDS.

The expenditures of labor and material during the fiscal year were as follows:

Yard improvements	\$9,646.69
Repairs and preservation	6,941.48
Maintenance	6,549.74
Emergency fund	4,178.32
Total	27,316.23

YARD IMPROVEMENTS.

Coal sheds, wharf, and general storekeeper's storehouse, acts of August 5, 1892, and March 3, 1889.—This work was completed in February, 1902, at a total expenditure of \$282,261.45. The wharf was practically built twice, the first effort having to be abandoned owing to the character of the bottom. The sheds have a capacity for 4,000 tons of coal. The wharf is 278 feet long and 48 feet wide and has a depth of 30 feet of water alongside.

Grading, act of March 3, 1901.—Grading under this appropriation has been carried on during the year, and consisted principally of reclaiming land to the west of Swimming Point Hill, filling a swamp, and building drains. The expenditures have amounted to \$9,335.19.

Coal-storage extension, act of March 3, 1901.—No work has been done under this appropriation, excepting that on plans, for which \$152.36 has been expended.

Commandant's residence, "Emergency fund, Navy Department, 1901," \$15,000.—No work has yet been done on this building, although some of the material has been delivered on the station. Surveys for the site are being made.

NAVAL STATION, GUAM.

Expenditures, 1902.

Repairs and preservation	\$12,258.86
Maintenance	24,934.29
Total	37,193.15

The repairs at this station have cost \$12,258.86, the expenditures being chiefly upon the yard buildings, lighters and boats, water supply, and miscellaneous objects. The Government house, an administration building, the warehouse, ice-plant building, ice plant, sawmill, boiler house, coal sheds, and other buildings, making a total of 16, were kept in the best condition the funds would allow of. Hauling-out ways were constructed at Piti, of native timber, and serve an important service for small station crafts. The waterworks have been improved, and a cistern constructed so as to afford fresh water for the power plant when in sufficient quantity and to dilute the river water used at other times.

The maintenance of the station has cost this bureau \$24,934.29 for the various incidental needs, principally for freight and transportation,

machinery and tools, teams, attendance on power plant and ice plant, fuel, and incidental expenses not chargeable to other appropriations.

The skilled employees are sent out from the United States on two years' agreement, and their pay must be continuous. Therefore their services can not be temporarily dispensed with, as in the case of native or resident labor. It is possible to utilize these skilled men upon work for the insular government upon some occasions when the station work is slack, and in this manner offset to some extent the disadvantages in expense arising from the necessary system.

The annual report of operations under this bureau received from the station contains an outline sketch of some of the principal steps, local and incident, in the establishment of the station, which is thought worthy of being here recorded and is as follows:

On August 7, 1899, the U. S. S. *Yosemite*, with Capt. R. P. Leary, U. S. Navy, governor, and two companies of marines under Maj. H. C. Kelton, U. S. M. C., arrived at the harbor of San Luis d'Apra, Guam.

Prior to the arrival of the *Yosemite* the United States was represented in Guam by Lieut. L. A. Kaiser, U. S. Navy, who made his headquarters on board the U. S. S. *Nanshan*, then in port.

On August 10 a detail of officers from the *Yosemite* was made for the purpose of making a survey of the harbor of San Luis d'Apra. Work was begun immediately and the survey completed about February 1, 1900. In the course of this work a frame observatory was built and equipped on the old Spanish fort Santa Cruz, situated on a small island in the head of the bay. At the observatory, tide gauges masonry foundations for transit instrument, tripod, and hydrographic signals were erected. By repeated observations and chronometer checks from Yokohama this point was accurately located.

Immediately on his arrival Governor Leary read his proclamation and took charge as governor of the island. He had all Government buildings at Agana examined, and found them unfit for occupation, and the city itself unhealthy on account of the entire absence or long neglect of sanitary arrangements and the general filthy habits of the inhabitants.

A guard of marines were sent ashore to Piti and Agana to receive and care for stores and material landed from the *Yosemite*. These men lived in tents.

On August 31 Company A of the Guam battalion of marines was landed and sent to Agana to prepare the government house for occupancy and to fit up quarters for the battalion. These men also lived in tents.

On September 11 Company B was sent to Agana. Work was commenced on the same day on an evaporating plant for the distillation of drinking water. The water used by Americans prior to the completion of this plant was distilled water from the *Yosemite*, sent ashore in casks. The distilling plant was composed of seven launch boilers supplying steam to a ship evaporator; river water was used for circulating water for condenser.

During August and September a pipe line was laid from the distilling plant to the government house and work began on a sewerage system, flushing water for which was furnished by pumping river water through a separate line of pipe, using for power an undershot wheel, a small dam being built to furnish the necessary head.

By order of the governor, heads of departments on board the *Yosemite* were placed in charge of the corresponding departments of the naval station, making four departments—equipment, construction and repair, medicine and surgery, and steam engineering.

On November 26 Governor Leary transferred his headquarters from the *Yosemite* to the government house, at Agana.

On November 27 mechanics from ship were sent on shore to perform duty at the naval station.

On December 9 the erection of a sawmill at Agana was begun and soon after completed; the mill was kept busy, as there was no American lumber on the island, and logs of native hard wood had to be sawed and used for building purposes.

An epidemic of typhoid fever broke out at about this time, some five or six deaths occurring in rapid succession. Nearly one-half the command was on the sick list from November to February.

On February 27 a preliminary topographic survey of the island was commenced, but had to be abandoned on March 25 on account of detachment of one of the two officers available for the duty.

The status of the station at this time was about as follows: A one-story concrete building had been erected and in it installed seven launch boilers with pumps and connections. A timber tower 20 feet high was erected and a tank of 10,000 gallons capacity placed in position; about 1,000 feet of 2-inch pipe lead from the distributing tank to the hydrant in front of the government house. Officers and men were given an allowance of distilled water, which was drawn at stated intervals from this hydrant. About 1,500 feet of sewer pipe was laid from such material as was at hand, the flushing water furnished from the river through a separate line of 2-inch pipe.

Most of the officers attached to the station filled civil positions in addition to their regular naval station duties. The governor's aid was judge of court of first instance, the commanding officer of marines was chief of public works, and the senior medical officer was health officer of the island.

Only three departments had been created: Steam engineering, in charge of the distilling plant, water and sewer systems; supplies and accounts (but no general storekeeper), and medicine and surgery. The hospital was established in a rented building near the plaza.

On July 20, 1900, Governor Leary was relieved by Commandant Seaton Schroeder, U. S. Navy, who arrived on the station on July 7.

On July 24 work was commenced on the installation of an ice and refrigerating plant, in a building rented for the purpose. Heavy concrete foundations were laid for the machinery and boiler, machinery erected, piping and connections completed, tanks, cans, brine tanks, and cold-storage room arranged.

Work was also done at this time in relaying pipes, extending sewers, etc.

On October 3, 1900, the ice plant was completed and first issue of ice made.

November 5, 1900, the department of yards and docks was created. Ensign H. L. Collins, U. S. Navy, being appointed head of department.

The ice plant, distilling plant, water and sewer systems were turned over to this department, and in the absence of a general storekeeper stores of all kinds were in its charge, returns being made direct to the Bureau of Supplies and Accounts. Inasmuch as the labor employed at

this time was largely furnished by enlisted men of the station, the line between island and naval station work was not definitely drawn, as a result of which condition the chief of public works and the head of department of yards and docks worked together on such public works, naval or island, as it was deemed necessary to carry on. Ship returns only were made, and no efforts made to install regular navy-yard system of accounting until such a time as a general storekeeper might be appointed.

On November 13, 1900, the island was visited by a severe typhoon which greatly damaged or destroyed all naval-station property, among the most important of which might be mentioned the observatory on Fort Santa Cruz, destroyed; saw mill at Agana, destroyed; the Government house and all other buildings owned or occupied by the naval station, unroofed and otherwise injured.

For about a year after this event the principal work done on the station was in the nature of repairs and rebuilding made necessary by the typhoon.

On January 25 an army detachment with Filipino prisoners arrived and made their camp on a piece of property owned by the island near Asan. Barracks, officers' quarters, commissary, prisoners' quarters, stables, etc., were built, and the name of presidio of Asan taken.

The pay officer of the station was appointed general storekeeper in April, 1901, and on June 7 all general stores were turned over and that department regularly started. Regular navy-yard methods were installed after a consignment of proper books and blanks reached the station.

In May, 1902, a department of construction and repair was created.

In June a department of equipment was created, that department and department of steam engineering being placed under the same head.

On July 1, 1901, the head of department of yards and docks relieved the commanding officer of marines as chief of public works of the island.

NAVAL STATION, CAVITE, P. I.

The expenditures of labor and material during the fiscal year were as follows:

Repairs and preservation	\$76,978.27
Maintenance	30,141.00
Civil establishment	973.33
Contingent	120.75
Emergency fund	24,939.89
Total	133,153.24

YARD IMPROVEMENTS.

Permanent mooring buoy for flagship of southern squadron, allotment \$6,595, January 6, 1902, from "Emergency fund, 1902."—Work was begun on this item in April, 1902, and completed in the same month. A telephone cable was supplied and laid by the Army, thus effecting an efficient telephone line of great convenience in communicating with the flagship. The amount expended under the allotment was \$5,435.62.

Disinfecting building (emergency fund, 1902), allotment March 28 1902, \$500.—This work was constructed during April and May, 1902, the material being stone drawn from unused casements of the old fortification. The cost was only \$394.31.

Roofing in space between buildings 6 and 7 (emergency fund, 1901, and repairs and preservation, 1902), January 30, 1901, \$3,200.—This work was authorized to provide a shop in which boilers and engines might be repaired. The work was completed in September, 1901, at a total expenditure of \$3,202.52, the expenditures for the fiscal year being \$1,126.87.

Steam engineering boiler shed, building No. 30.—This building was authorized and begun during the last fiscal year under an allotment from the emergency fund, 1900–1901. This allotment was insufficient for the purchase of the material alone, and little work was done. Work was resumed in November, 1901, and the building completed in March, 1902, under repairs, 1902, when it was at once put into service. The total cost of the work has been \$10,697.37.

Yards and docks blacksmith shop, building No. 31.—This building was erected under allotments from repairs, 1901 and 1902. The work was very necessary, as the Department had no place where blacksmithing and similar work could be done. The building was completed in September, 1901, at a total cost of \$460.01.

Construction and repair shed and sawmill, building No. 27.—The erection of this building was undertaken by the department of construction and repair in the last fiscal year, and has progressed continuously, although with considerable delay, principally on account of not enough funds being available. This work has been performed under allotments from emergency funds, 1901–2, and expenditures to date have been \$13,608.48. Considerable work yet remains to be done.

Construction and repair ship-fitters' and smiths' shop, building No. 29.—This building was authorized under emergency fund, 1902, and allotments made therefor. The work of construction began in February, 1902, and continued through the remainder of the fiscal year, the cost to date aggregating \$10,752.48. Work is now suspended awaiting available funds.

Equipment building No. 38.—Contract for this work was made with B. M. Cadwallader & Co., of Manila, June 5, 1902, for the sum of \$28,987, under an allotment of \$30,000 from the emergency fund, 1902. Work on the foundations has begun and was progressing favorably at the close of the fiscal year.

Several other works of improvement were either begun or completed during the fiscal year under allotments from the emergency fund, and while the expenditures therefor are considerable in the aggregate, they are not worthy of detailed statement.

NAVAL STATION, POLLOC, P. I.

The expenditures at this station, under this Bureau, have been very small, and were limited to very moderate repairs to the small dry dock, including a new pumping apparatus for draining the dock and for use as a fire pump, and installing a small and inexpensive repair shop by the side of the dry dock. These outlays were provided for by the allotment of a small amount from the emergency fund, Navy Department, 1901–2. A further allotment from the same fund was made by Executive order for repairing damages to the barracks and hospital building occasioned by a cyclone of April 22, 1901.

The station is chiefly a marine post, and the garrison and its officers

occupy practically all the buildings. Very little use is being made of it as a station at the present time, but in the event of hostilities in that section of the islands it would be an invaluable base.

NAVAL STATION, OLONGAPO, P. I.

Expenditures, 1902.

Emergency fund \$7,233.88

Very little has been done at this station. A few minor expenditures were made upon the yard shears.

An allotment from the emergency fund, 1901, was made by the Department August 2, 1900, for the purpose of conducting surveys and examinations of the island of Guimaras, P. I., with the view of establishing a naval base and station thereon; and on October 29, 1900, it was extended by the President to cover the expenses of a commission to inspect various locations in the Philippine Islands with a view of selecting the most suitable site for a naval station, and an additional allotment of \$10,000 from the emergency fund, 1902, one-half of the prior allotment having lapsed into the Treasury. The investigations were carried on until the end of the fiscal year, June 30, 1902, when the balance of the fund reverted to the Treasury, and surveys were suspended. It is desirable that the surveys be continued to completion, and an appropriation of \$10,000 for the object is recommended. The location of the principal naval station in the Philippines is a very important matter, and full and exhaustive surveys and study should be given the subject.

RECOMMENDATIONS AND ESTIMATES FOR THE FISCAL YEAR 1903-1904.

The estimates to be laid before Congress for all the navy-yards and naval stations are as follows:

Public works of improvement.....	\$5,814,440.00
Repairs and preservation	550,000.00
Maintenance, yards and docks	600,000.00
Contingent, yards and docks	50,000.00
Civil establishment.....	758,903.70
Plans and specifications.....	30,000.00
Total.....	7,803,343.70

The public works at the navy-yards will still be far short of the necessities of the naval service when all those now in progress and projected are completed. New and better resources for the work of the Navy are continually being required, and it is the wisest course to meet them as they become apparent, and not allow their absence to become an embarrassment in the ordinary conditions and a grievous deficiency in times of emergency. Many additions are now urgently needed, some of which are included in the estimates approved by the Department.

Appropriations should be made for the proper berthing and storage of the large number of torpedo vessels now afloat and building. The subject was made a study by a board of officers, and its report was approved by the Department, providing for storage facilities at various yards. While it is not necessary to carry out this plan in its entirety at the present time, something should be done to provide adequate and safe berthing for them, which can be done at no great cost, leaving the more elaborate and expensive provisions for taking the vessels out of

the water at a later time. An appropriation of a half million dollars would go far toward this purpose.

Within a few months all torpedo-boat destroyers, torpedo boats, and submarine boats contracted for by the Government will be finished, making in all 16 torpedo-boat destroyers, 36 torpedo boats, and 8 submarine torpedo boats. Since the method outlined for their care by the board above referred to, and upon which estimates were based and presented to Congress, no appropriations have been made, and such facilities as exist have been provided at Norfolk, where 13 can be accommodated, and at Port Royal, in the dry dock, where 5 or 6 can be stored. Docks or slips also exist at Newport, where 7 or 8 boats can be berthed. A plan for constructing other slips at Newport is now under consideration by the Department, for which the funds in hand can provide without a further appropriation, accommodating about a half dozen. About 32 boats can therefore be housed with funds in hand, and appropriations are requisite at once for housing 28 more. The Bureau of Ordnance deems this step of very great importance, and proposes that the additional storage slips be provided at Newport, Norfolk, and some point upon the Pacific coast, preferably at the Mare Island Navy-Yard. This would accomplish the desirable object of grouping these vessels in tactical units, and keep a minimum of officers and men upon their care, and have them ready at any time for commission in units of 7.

The estimates submitted include a considerable sum for carrying on work upon the dry docks now authorized. A steel floating dry dock to lift vessels weighing about 5,000 tons should be built to replace the wooden floating dry dock at the Portsmouth Navy-Yard, which is still in service, though old and weak. This dock has done all the docking at this yard for about fifty years, and, fearing it is now unsafe for further use, the commandant of the yard has requested a survey by experts to determine this question. About \$400,000 would replace it with a modern steel dock and afford a convenient means of docking the smaller vessels of the Navy.

Estimates are also submitted for various new buildings, modifications and extensions of old ones, increase in coaling facilities, piers, and quay walls, dredging, extensions of the railroad, sewer, power and water systems, etc., which are deemed of the first importance.

The general appropriations for repairs and preservation and maintenance are submitted, with an increase of \$50,000 in the latter over the sum appropriated for the current fiscal year. The demands upon these appropriations are manifold and of the most exacting character, and any deficiency in meeting them goes directly to the efficiency of the stations. The appropriations are small in consideration of the great extent of property to be kept in repair and incidental expenses to be met. These expenses increase with the increase of the naval establishment. The larger appropriation for maintenance is urgently needed.

The Bureau renews its recommendation, made in a former report, that a board of able and experienced officers be appointed to consider the subject of the location of a naval station upon our southern Pacific coast. The distance from the Mare Island Navy-Yard to the southern extremity of the coast line is so great as to render it desirable, in the Bureau's opinion, that docking and repair facilities as well as a base for naval supplies be established near such border.

Our ordinary interests in that direction are increasing, and the construction of the interoceanic canal will greatly enhance the importance of the naval establishment upon the Pacific coast. A station capable of taking the largest vessels into dry dock, making repairs and furnishing supplies at the nearest practicable southern point, is considered of high importance, both with respect to the ordinary duties of the Navy, for the largest naval vessels must dry dock at Puget Sound, and the operations of the Navy in time of hostilities when it might prove inestimable.

Property at Pearl Harbor having been acquired for the establishment of a naval station, under the authority of Congress, the Bureau recommends that the improvement of the property be authorized. Appropriations for two moderate sized shops were made in the act of March 3, 1901, which have been held for use upon completion of the purchase of lands at Pearl Harbor; but many other works are necessary at once to initiate the establishment of a station of sufficient facilities for vessels calling here. It lies upon what is now a most important road between the States and other insular possessions, and it is considered of high importance that docking accommodations for all vessels up to the largest class and repair facilities be secured.

The outlays would not be large for this purpose, and need not look to the building of a station of the largest class, but one of moderate extent and cost.

The establishment of a naval station in the Philippines fully adequate for the general purposes of the naval service in those waters is still in an undetermined state. The investigation and report required by Congressional action were made by the board of which Rear-Admiral George C. Remey was president; the site recommended by such board was at Olongapo, Subic Bay. In anticipation of the favorable action of Congress upon this report, a general plan for the development of a naval station at that point, with estimates of cost, was prepared by a board of officers, and the whole subject was brought before Congress in the estimates submitted in the Bureau's last report and schedule of estimates, based upon the plans mentioned. No action was taken by Congress, and the subject is practically in abeyance. The question should be definitely decided at an early time. The uncertainty hanging over the subject leads to a restriction of expenditures at the Cavite station, which are absolutely needed at the present time to give proper service, and operates to impair the general efficiency. The more detailed surveys requisite are referred to elsewhere, and it is recommended that \$10,000 be appropriated for their continuance.

The improvement of the naval station at San Juan, P. R., should be carried out upon the lines presented in the Bureau's last annual report, if the selection of this point by the board constituted under authority of Congress for the purpose be approved.

I beg to call to the attention of the Department and Congress the importance of an organization of the corps of civil engineers upon a somewhat different basis from that now existing. The corps as authorized at the date of this report numbers 27. All these belong to the one and only grade of full civil engineer.

There should be added to the corps the grade of assistant civil engineer, in order that young men may be appointed to the lower grade first and be promoted to the grade of full civil engineer as vacancies

occur in the latter, after some years of experience and after a further examination to test their fitness for such promotion.

I would recommend that the number of assistant civil engineers be not fixed by law, but be variable, at the discretion of the President, to suit the requirements of the service. The corps as it now exists is not sufficiently large for the prosecution of the work of designing, constructing, and maintaining the public works in the Navy at the yards and stations. Such assistants, being commissioned officers, would have the requisite authority and status to perform any duty assigned to them in connection with public works, and take charge of the same and represent the civil engineer in his absence. There would also be the manifest advantage of having young officers in training in the subordinate grade in the line of public works under the cognizance of this Bureau, to fit them in a special degree for the vacancies occurring in the grade of civil engineer. Such commissioned officers would probably have a greater interest in the work than temporarily employed civilians, thus insuring a more efficient administration and better results.

It is urgently requested that the corps of civil engineers be increased to 40 at once, to consist of 28 civil engineers and 12 assistant civil engineers. This is the smallest number that it is deemed practicable to handle the work with, having regard to its proper dispatch and economy as well as quality. I would recommend that the distribution of rank for the corps on the above basis be as follows:

Civil engineers: Five with the rank of captain, 5 with the rank of commander, 8 with the rank of lieutenant-commander, 9 with the rank of lieutenant.

Assistant civil engineers: Six with the rank of lieutenant (junior grade) and the remainder with the rank of ensign.

It is further recommended that the benefits of the law granting allowances to officers of certain corps of the Navy, in accord with that governing in the Army for all officers, be extended to apply to the corps of civil engineers in the Navy.

That portion allowing commutation for quarters when not furnished in kind it is especially hoped may be so extended. There seems no good reason to the Bureau why all officers of the Navy should not receive this benefit.

The estimates for public works of improvement are given in detail under the head of each yard and station:

NAVY-YARD, PORTSMOUTH, N. H.

Estimates.

Quay wall, to extend	\$75,000
Grading, to continue	25,000
Railroad rolling stock, additions	8,000
Sewer system, extensions	4,000
Water system, extensions	4,000
Tools for yards and docks	2,000
Locomotive crane and track	50,000
Electric plant, extensions	15,000
Central heating plant	15,000
Steel-plant building for construction and repair (to cost \$150,000)	50,000
Removal of Hendersons Point (to cost \$749,000)	549,000
Blasting in front of quay wall	25,000
Naval prison	95,000
Coaling plant, extensions	30,000
Total	947,000

There is no report on the following recommended appropriations: Toilet rooms for naval prison, steam-heating and improvements building 45, extension to electrical workshop, extensions to brass foundry, bridge between buildings 45 and 65, remodeling chain shed.

NAVY-YARD, PUGET SOUND, WASH.

Estimates.

Sewers, extensions.....	\$5, 000
To continue grading.....	30, 000
Fire-protection system, extensions.....	10, 000
Electric-light plant, extensions.....	3, 000
Telephone system, extensions.....	1, 000
Railroad and equipment, extensions.....	10, 000
Boat shop for construction and repair (to cost \$150,000).....	50, 000
Water-closets.....	2, 000
Water system, extension.....	8, 000
Foundry and coppersmith shop (to cost \$100,000).....	50, 000
Boiler and blacksmith shop (to cost \$100,000).....	50, 000
Heating system, extensions.....	3, 000
Extension of dry-dock boiler plant.....	10, 000
Extension of general office building.....	5, 000
Two officers' quarters.....	15, 000
Sick quarters, to complete.....	4, 200
Locomotive crane and track about dry dock (to cost \$100, 000).....	50, 000
Timber floats and gangway bridges.....	2, 000
Garbage scow.....	1, 000
Total.....	310, 200

As with other yards, the natural growth of this yard demands from year to year an increase or extension of the sewer, telephone, water, fire-protection, and heating systems, and the electric-light plant. Grading also should be continued, preparing sites for new buildings and reducing the yard generally to its established grade. Appropriations are asked for these several items as noted above.

Boat shop for construction and repair (to cost \$150,000).—This building is a very necessary improvement at this yard, as the department of construction and repair is at present very insufficiently equipped, and it is hoped that the appropriation asked will be allowed.

Water-closets.—These are a very necessary equipment to all yards, and appropriations therefor are recommended.

Foundry and coppersmith shop (to cost \$100,000).—The equipment of the department of steam engineering, like that of construction and repair at this yard, is very inadequate, and this appropriation is earnestly recommended.

Boiler and blacksmith shop (to cost \$100,000).—These shops are much needed and are very necessary to properly carry on the work of the yard. The demands made on the Bureau of Steam Engineering for this class of work are rapidly increasing and at present can not be satisfactorily met.

Extension of dry-dock boiler plant.—The increased use of power from this source taxes the present plant to its limit, and this demand should be met by the installation of additional boilers and other accessories, and the appropriation therefor is recommended.

Extension of general office building.—At present there are no officers' quarters available for assignment to several of the heads of departments. While two are not all that are needed, appropriations are asked only for that number.

Sick quarters, to complete.—The original appropriation was not sufficient to complete this work as originally planned, and the appropriation now recommended is necessary to finish the work in detail.

Locomotive crane and track about dry dock (to cost \$100,000).—A locomotive crane about the dry dock is necessary to its proper equipment, and it is hoped that the appropriation therefor will be granted.

Timber floats and gangway bridges.—The yard is poorly equipped in this respect, and an appropriation therefor is recommended.

Garbage scow.—A scow is needed for conveying garbage out to deep water to be dumped, and the appropriation therefor is requested.

NAVAL STATION, CAVITE, P. I.

Estimates.

Floating steel dry dock (to cost \$1,225,000)	\$300,000
Distilling plant.....	20,000
Total	320,000

Floating steel dry dock (to cost \$1,225,000).—Congress at its last session provided for the construction of a floating steel dry dock of the largest size and to cost \$1,225,000, and to this end appropriated \$200,000. The specification for this dock will soon be prepared, and the work will then be advertised. It is believed that \$300,000 now asked will be sufficient, together with the sum already appropriated, to meet the obligations until the end of the next fiscal year.

Distilling plant.—The lack of a fresh-water supply is a serious hindrance to the progress and welfare of the station. Water for drinking, for boilers, and for general yard use must all be obtained from Manila by water boats, except the small and variable amount of rain water caught from the roofs. In case of long interrupted communication between Manila and the yard, work would have practically to cease and much other inconvenience would result unless a distilling plant is installed at the station. For this purpose it is recommended that four boilers be added to those intended as a part of the electric-light station, thus increasing the available power of the electric-light plant at night when the greatest demand occurs, and enabling the boilers to be used for distilling purposes when not otherwise employed during the day.

Officers on duty at this station undergo many inconveniences in the manner of living, and the quarters in the station are scarcely worth the name. It is recommended that a special appropriation be made for quarters which will be fit and such as will enable officers upon duty at this station to have their families with them. At present many are limited to a single living room.

HONOLULU.

More room for the berthing of vessels is necessary. When a large vessel comes to the wharves, the small craft, including coal barges, must be hauled out and give place. An appropriation of \$12,000 would afford the conveniences requisite, and would be sufficiently permanent in view of the expected improvements at Pearl Harbor.

NAVAL STATION, TUTUILA.

Estimates.

Grading and filling.....	\$20,000
Waterworks and accessories.....	5,000
Carpenter and blacksmith shop.....	5,000
Mooring shoal and channel buoys.....	4,000
Total.....	34,000

There is very little land area upon a proper grade for station purposes, and nearly all availed of must be graded. This work is important, and should be continued.

Additions are very necessary to the water supply, and a small shop for miscellaneous work is requisite.

The waters are not sufficiently marked, and a moderate appropriation is requested for establishing buoys.

The papers which accompany this report are as follows:

- No. 1. Report of expenditures (material and labor) at navy-yards and stations during the fiscal year ended June 30, 1902.
- No. 2. Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Repairs and preservation, navy-yards and stations," during the fiscal year ended June 30, 1902.
- No. 3. Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Maintenance, yards and docks," during the fiscal year ended June 30, 1902.
- No. 4. Detailed reports from navy-yards and stations of expenditures under appropriation "Civil establishment, Bureau of Yards and Docks," during the fiscal year ended June 30, 1902.
- No. 5. Report of expenditures under appropriation for salaries for Bureau of Yards and Docks during fiscal year ended June 30, 1902.
- No. 6. Statement of appropriations for Bureau of Yards and Docks, showing amounts appropriated, obligated, and remaining unobligated June 30, 1902, under each specific head of appropriation.
- No. 7. Statement of offers received during the fiscal year ended June 30, 1902, for works of improvement under the cognizance of the Bureau of Yards and Docks, as required by section 429, Revised Statutes.
- No. 8. Summary statement of estimates received from navy-yards and stations for fiscal year ending June 30, 1904.
- No. 9. Detailed statement of estimates received from navy-yards and stations for works of improvement for fiscal year ending June 30, 1904.
- No. 10. Detailed statement of estimates received from navy-yards and stations for "Repairs and preservation" for fiscal year ending June 30, 1904.
- No. 11. Detailed statement of estimates received from navy-yards and stations for "Maintenance" for fiscal year ending June 30, 1904.
- No. 12. Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904.
- No. 13. Detailed statement of estimates submitted by the Bureau for the fiscal year ending June 30, 1904.
- No. 14. Tabulated statement showing the character, value, and condition of improvements under the cognizance of the Bureau at navy-yards and stations June 30, 1902.

Very respectfully,

MORDECAI T. ENDICOTT,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF THE SECRETARY OF THE NAVY.

No. 1.—*Report of expenditures (material and labor) at navy-yards and stations for the fiscal year ended June 30, 1902.*

Navy-yards and stations.	Yard im- provements.	Appropriations.		
		Repairs and preservation	Mainte- nance.	Civil estab- lishment.
Boston, Mass.	\$823,055.42	\$44,251.84	\$55,311.25	\$8,258.75
Bureau			7,595.64	
Cavite, P. I.		76,978.27	30,141.00	973.33
Charleston, S. C.	336.71		1,175.04	
Dry Tortugas, Fla.	91,816.67		10.41	
Erie, Pa.			500.00	
Guam, L. I.		12,258.86	24,934.29	
Habana, Cuba.	33,872.33		9,642.48	
Hawaii, H. I.	16,210.47	809.06	5,649.98	556.00
Key West, Fla.	41,840.39	7,521.32	6,668.76	600.00
League Island, Pa.	461,672.36	33,943.35	41,885.23	9,752.30
Mare Island, Cal.	449,528.92	61,364.23	89,762.39	14,231.11
Narragansett Bay, R. I.	1,445.25			
New London, Conn.	26,107.38	2,494.73	3,828.69	
New Orleans, La.	159,143.65	60.25	2,568.92	
New York, N. Y.	658,284.87	92,599.87	101,575.24	21,546.71
Norfolk, Va.	354,620.00	49,203.70	51,254.55	12,156.36
Olongapo, P. I.				
Pensacola, Fla.	28,888.63	18,442.05	15,269.28	1,930.00
Port Royal, S. C.	47,229.69	13,098.09	11,714.42	6,373.58
Pollock, P. I.				
Portsmouth, N. H.	541,913.06	52,613.13	49,726.67	8,207.16
Puget Sound, Wash.	209,386.87	25,080.29	22,070.99	5,502.12
Sacketts Harbor, N. Y.				365.00
San Juan, P. R.	17,659.74	12,742.07	11,803.33	1,104.00
Tutuila, S. I.	9,646.69	6,941.48	6,549.74	
Washington, D. C.	386,708.29	42,421.34	24,711.89	5,689.25
Total	4,859,367.39	552,823.93	574,345.19	97,245.67

Navy-yards and stations.	Appropriations.			Total.
	Contingent, yards and docks.	Emergency fund.	National de- fense.	
Boston, Mass.				\$930,877.26
Bureau				7,595.64
Cavite, P. I.	\$120.75	\$24,939.89		133,153.24
Charleston, S. C.				336.71
Dry Tortugas, Fla.	99.52		\$1,360.00	93,286.60
Erie, Pa.				500.00
Guam, L. I.				37,193.15
Habana, Cuba.				43,514.81
Hawaii, H. I.	1,902.90			25,128.41
Key West, Fla.				56,630.47
League Island, Pa.	1,090.56			548,343.80
Mare Island, Cal.	1,019.90			615,906.55
Narragansett Bay, R. I.				1,445.25
New London, Conn.				32,430.80
New Orleans, La.	302.90			162,070.72
New York, N. Y.				874,006.69
Norfolk, Va.				467,234.61
Olongapo, P. I.		7,233.88		7,233.88
Pensacola, Fla.	1,069.61			65,599.57
Port Royal, S. C.				78,415.78
Pollock, P. I.		755.00		755.00
Portsmouth, N. H.	6,082.69			658,542.71
Puget Sound, Wash.				262,040.27
Sacketts Harbor, N. Y.				365.00
San Juan, P. R.				43,309.14
Tutuila, S. I.		4,178.32		27,316.23
Washington, D. C.	706.00			460,230.77
Total	12,388.83	37,107.09	1,360.00	5,634,638.10

No. 2.—Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Repairs and preservation, navy-yards and stations," during the fiscal year ended June 30, 1902.

	Boston.	Cavite.	Guam.	Hawaii.
Yard buildings	\$8,446.28	\$22,868.80	\$4,448.16	\$531.55
Officers' quarters	5,334.53	556.67	538.47	
Wharves, sea walls, piers, bridges, etc	2,462.43	17,497.01	132.50	
Roads, walks, gutters, sewers, and drains	5,031.92	6,420.83	342.46	
Fences and walls	11.32	1,793.74	238.49	3.00
Cranes, derricks, sheers, and hoisting apparatus ashore	20.28	2,254.09	50.33	
Scows, lighters, boats, floats, etc., and hoisting apparatus afloat	282.82	17,047.46	1,097.35	37.62
Furnaces, forges, heating apparatus, etc	2,261.33	1,684.65		
Tracks and track and platform scales	289.64	1,819.78		
Waterworks and accessories	1,060.72	1,210.78	1,882.03	
Dredging, scowing, grading, filling in, etc		403.09	159.98	
Dry docks (body of dock)		51.26		
Dry docks (pumping plant)	732.94			
Dry docks (other accessories)	67.94	1,802.66		
Heating, lighting, and power plants, and accessories	11,703.75	209.57	284.32	34.85
Telephone, telegraph, and tube systems, etc	540.50	354.56	172.93	
Miscellaneous repairs	6,005.44	1,003.32	2,911.84	202.04
Total	44,251.84	76,978.27	12,258.86	809.06

	Key West.	League Island.	Mare Island.	New London.	New Orleans.
Yard buildings	\$4,493.01	\$6,540.59	\$7,522.97	\$996.85	\$40.00
Officers' quarters	187.66	9,211.29	1,340.00	66.48	
Wharves, sea walls, piers, bridges, etc	2,163.30	747.12	742.95	47.48	
Roads, walks, gutters, sewers, and drains		1,444.56	589.49	115.09	
Fences and walls		79.43	420.11		
Cranes, derricks, sheers, and hoisting apparatus ashore		132.11	2,641.04	1,098.23	
Scows, lighters, boats, floats, etc., and hoisting apparatus afloat	4.84	93.48	6,388.22		
Furnaces, forges, heating apparatus, etc		966.19	1,801.32		
Tracks and track, and platform scales		1,447.81	5,992.33		
Waterworks and accessories	105.23	1,096.60	825.57	163.56	4.25
Dredging, scowing, grading, filling in, etc		70.93	62.96		
Dry docks (caisson)		74.40	697.18		
Dry docks (pumping plant)		2,864.39	139.33		
Dry docks (other accessories)			191.80		
Heating, lighting, and power plants, and accessories		3,492.26	12,298.54		16.00
Telephone, telegraph, and tube systems, etc		1,288.01	2,280.13		
Miscellaneous repairs	567.28	4,594.18	17,430.29	7.04	
Total	7,521.32	33,943.35	61,364.23	2,494.73	60.25

	New York.	Norfolk.	Pensacola.	Port Royal.	Portsmouth.
Yard buildings	\$30,410.02	\$10,846.09	\$2,999.32	\$1,372.83	\$10,315.95
Officers' quarters	9,095.39	4,549.82	865.66	3,213.91	2,903.03
Wharves, sea walls, piers, bridges, etc	2,797.66	2,070.14	852.11	402.76	571.35
Roads, walks, gutters, sewers, and drains	650.12	717.99	1,057.71	1,264.67	1,599.24
Fences and walls	211.56	1,492.34	122.64		725.28
Cranes, derricks, sheers, and hoisting apparatus ashore	1,043.29	2,266.10	237.80	38.44	211.56
Scows, lighters, boats, floats, etc., and hoisting apparatus afloat	1,134.95	963.71	20.83	108.12	2,948.08
Furnaces, forges, heating apparatus, etc	5,729.60	1,251.11	224.60		
Tracks and track, and platform scales	1,516.49	687.70	502.72		215.00
Waterworks and accessories	5,008.54	4,256.06	1,262.61	2,288.14	2,401.28
Dredging, scowing, grading, filling in, etc			78.54	151.95	
Dry docks (body of dock)	35.73	2,489.93	673.34	18.96	1,152.22
Dry docks (caisson)	469.70	3,772.07			
Dry docks (pumping plant)	6,060.16	466.37	163.37	1,431.88	
Dry docks (other accessories)					
Heating, lighting, and power plants, and accessories	3,873.20		1,289.65		
Telephone, telegraph, and tube systems, etc	14,598.67	10,907.73	1,414.05	2,452.09	13,864.21
Miscellaneous repairs	2,131.28	1,330.42	730.89	258.48	130.10
Total	92,599.87	49,203.70	18,442.05	13,098.09	52,613.13

No. 2.—Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Repairs and preservation, navy-yards and stations," during the fiscal year ended June 30, 1902—Continued.

	Puget Sound.	San Juan.	Tutuila.	Washington.	Total.
Yard buildings.....	\$5,264.67	\$6,073.53	\$784.17	\$13,447.63	\$137,402.42
Officers' quarters.....	2,933.30	1,862.13	447.93	3,508.20	46,614.47
Wharves, sea walls, piers, bridges, etc....	1,788.23	311.72	8.39	511.26	33,107.41
Roads, walks, gutters, sewers and drains.	106.77	931.44	153.47	3,497.84	23,913.60
Fences and walls.....	86.75	23.30		1,344.75	6,552.71
Cranes, derricks, sheers, and hoisting apparatus ashore.....			75.00		10,068.27
Scows, lighters, boats, floats, etc., and hoisting apparatus afloat.....	38.92	86.40			30,262.80
Furnaces, forges, heating apparatus, etc.	328.49			3,832.53	18,079.82
Tracks and track and platform scales....	1,650.48		24.14	7,124.77	21,270.86
Waterworks and accessories.....	510.28	2,405.53	100.00	1,135.41	25,716.59
Dredging, scowling, grading, filling in, etc.					927.45
Dry docks (body of dock).....	178.68				4,600.12
Dry docks (caisson).....	257.60				5,270.95
Dry docks (pumping plant).....	1,415.23				13,273.67
Dry docks (other accessories).....	140.54				7,365.79
Heating, lighting, and power plants, and accessories.....	4,610.95			6,499.40	82,386.39
Telephone, telegraph, and tube systems, etc.....	3,315.13		340.53	32.18	12,905.14
Miscellaneous repairs.....	2,456.27	1,048.02	5,007.85	1,497.37	33,117.47
Total.....	25,080.29	12,742.07	6,941.48	42,421.34	552,823.93

No. 3.—Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Maintenance, yards and docks" for the fiscal year ended June 30, 1902.

	Boston.	Bureau.	Cavite.	Charleston.	Dry Tortugas.	Erie.
Freight and transportation (persons and materials).....	\$16.30	\$3,137.55				
Books, maps, models, and drawings....	1,018.66	940.36	\$971.46		\$2.10	
Purchase and repair of fire engines, apparatus, and plants.....	201.58		20.50			
Purchase and repair of machinery and tools.....	1,009.94		627.44			
Purchase and maintenance of oxen, horses, and driving teams.....	3,247.01		973.40			
Carts, timber wheels, and vehicles, for use in navy-yards.....	445.75		94.71			
Postage on public matter, telegrams, telephone rental, etc.....	57.55	455.10				
Printing and stationery.....	755.01	1,075.45	694.91		5.91	
Furniture for Government houses and offices in navy-yards.....	1,044.79	969.18	855.01	\$218.00		
Heating, lighting, and power plants (coal and other fuel, candles, oil, gas, electricity, etc).....	9,932.49		1,652.51			
Heating, lighting, and power plants (attendance on).....	11,871.49		146.91		2.40	
Cleaning and clearing up yard and care of buildings.....	4,874.75		9,992.80			
Water.....	10,228.11		1,041.88			
Flags and awnings.....	98.88		135.70			
Advertising.....		940.00				
Pay of watchmen.....	3,864.96		1,963.50			
Incidental labor and miscellaneous labor.....	6,643.98	78.00	10,470.27	957.04		\$500.00
Total.....	55,311.25	7,595.64	30,141.00	1,175.04	10.41	500.00

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No. 3.—Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Maintenance, yards and docks" for the fiscal year ended June 30, 1902—Continued.

	Guam.	Hawaii.	Habana.	Key West.	League Island.	Mare Island.
Freight and transportation (persons and materials).....	\$2,078.42	\$9.75	.....	.....	\$1,169.67	\$3,492.76
Books, maps, models, and drawings.....	448.89	566.29	.....	\$16.06	149.38	.....
Purchase and repair of fire engines, apparatus, and plants.....	180.08	.....	.....	.....	6.17	112.33
Attendance on fire engines, apparatus, and plants.....	.....	.....	.....	.....	6,508.92	2,027.54
Purchase and repair of machinery and tools.....	1,324.82	77.69	.....	16.15	519.52	603.30
Purchase and maintenance of oxen, horses, and driving teams.....	2,044.93	720.00	.....	.....	5,139.81	7,572.40
Carts, timber wheels, and vehicles, for use in navy-yards.....	152.13	88.75	.....	.....	431.54	434.68
Postage on public matter, telegrams, telephone rental, etc.....	.....	52.50	.....	86.00	509.26	8.07
Printing and stationery.....	1,274.69	223.13	.....	91.55	657.37	1,280.27
Furniture for Government houses and offices in navy-yards.....	380.72	247.85	.....	79.27	1,271.54	769.24
Heating, lighting, and power plants (coal and other fuel, candles, oil, gas, electricity, etc.).....	6,514.04	116.80	.....	696.48	10,269.36	38,915.56
Heating, lighting, and power plants (attendance on).....	7,024.13	.....	.....	.....	7,607.09	6,265.02
Cleaning and clearing up yard and care of buildings.....	792.47	1,021.50	.....	887.22	2,894.25	9,323.27
Water.....	.....	32.05	.....	68.25	.....	11,480.04
Flags and awnings.....	.....	838.90	.....	7.23	55.39	24.00
Pay of watchmen.....	.....	698.00	.....	4,707.30	712.00	2,197.92
Incidental labor and miscellaneous labor.....	2,718.97	956.77	\$9,642.48	13.25	3,983.96	5,255.99
Total.....	24,934.29	5,649.98	9,642.48	6,668.76	41,885.23	89,762.39

	New London.	New York.	Norfolk.	Pensacola.	Port Royal.	Portsmouth.
Freight and transportation (persons and materials).....	\$40.85	.....	\$225.00	\$13.00	.....	.....
Books, maps, models, and drawings.....	.....	\$305.11	21.92	.....	.....	\$21.54
Purchase and repair of fire engines, apparatus, and plants.....	.....	428.80	178.10	260.78	\$33.55	977.20
Attendance on fire engines, apparatus, and plants.....	.....	.....	1,055.48	482.00	.....	2,057.62
Purchase and repair of machinery and tools.....	3.70	1,537.12	2,577.24	466.25	35.74	1,125.44
Purchase and maintenance of oxen, horses, and driving teams.....	1,113.38	10,215.44	3,115.84	1,738.41	1,121.31	6,211.36
Carts, timber wheels, and vehicles, for use in navy-yards.....	6.90	2,353.78	4,098.26	156.26	.....	789.97
Postage on public matter, telegrams, telephone rental, etc.....	78.68	403.57	100.20	90.00	178.52	107.50
Printing and stationery.....	.....	1,296.41	697.26	110.15	233.78	268.59
Furniture for Government houses and offices in navy-yards.....	.....	2,716.84	896.64	16.00	12.90	2,232.07
Heating, lighting, and power plants (coal and other fuel, candles, oil, gas, electricity, etc.).....	181.64	23,430.79	7,907.68	551.99	170.79	14,485.33
Heating, lighting, and power plants (attendance on).....	.....	11,389.82	6,375.93	2,664.76	3,943.21	10,611.37
Cleaning and clearing up yard and care of buildings.....	802.18	11,996.81	7,698.43	2,134.24	705.67	3,188.52
Water.....	.....	24,191.56	5,248.16	223.96	2,936.65	.....
Flags and awnings.....	51.00	124.13	197.94	17.28	59.42	74.76
Advertising.....	.....	.....	.....	.....	.....	6.55
Pay of watchmen.....	.....	.....	.....	.....	.....	.....
Incidental labor and miscellaneous labor.....	1,515.36	7,717.55	9,166.92	5,285.40	1,109.60	4,090.50
.....	35.00	3,467.51	1,653.55	1,058.80	1,173.28	3,578.35
Total.....	3,828.69	101,575.24	51,254.55	15,269.28	11,714.42	49,726.67

No. 3.—Detailed report from navy-yards and stations of expenditures (material and labor) under appropriation "Maintenance, yards and docks" for the fiscal year ended June 30, 1902—Continued.

	Puget Sound.	San Juan.	Tutuila.	Washington.	New Orleans.	Total.
Freight and transportation (persons and materials).....		\$59.00		\$25.00		\$10,267.30
Books, maps, models, and drawings....	\$27.49	675.40		22.00	\$6.00	5,192.66
Purchase and repair of fire engines, apparatus, and plants.....	98.90	95.77				2,593.76
Attendance on fire engines, apparatus, and plants.....	2.40					12,173.96
Purchase and repair of machinery and tools.....	249.54	1,007.37	\$58.29	318.64	32.00	11,590.19
Purchase and maintenance of oxen, horses, and driving teams.....	576.21	1,127.78		4,361.03		49,278.31
Carts, timber wheels, and vehicles, for use in navy-yards.....	127.67	551.88	205.80	2,308.82		12,246.90
Postage on public matter, telegrams, telephone rental, etc.....		7.31		200.05		2,334.31
Printing and stationery.....	563.46	465.70	82.50	297.64	233.12	10,306.90
Furniture for Government houses and offices in navy-yards.....	470.63	302.81	2,265.98	1,979.57	368.80	17,097.84
Heating, lighting, and power plant, (coal and other fuel, candles, oil, gas, electricity, etc.).....	7,189.76	1,020.57	20.67	3,928.50	51.00	127,035.96
Heating, lighting, and power plants (attendance on).....	6,799.03	115.00		2,692.56		78,008.72
Cleaning and clearing up yard and care of buildings.....	2,264.95	2,259.48	1,448.83	7,552.34		69,837.71
Water.....	345.85	2,516.64				58,313.15
Flags and awnings.....	390.72	185.29	47.27	183.35	31.50	2,522.76
Advertising.....						946.55
Pay of watchmen.....						43,029.01
Incidental labor and miscellaneous labor.....	2,964.38	1,413.33	2,420.40	842.39	1,841.50	52,096.01
Total.....	22,070.99	11,803.33	6,549.74	24,711.89	2,563.92	574,345.19

No. 4.—Detailed report from navy-yards and stations of expenditures under appropriation "Civil establishment, Yards and Docks," during the fiscal year ended June 30, 1902.

Navy-yard, rating, and rate of pay.	Amount appropriated.	Amount expended.
BOSTON, MASS.		
One clerk.....	\$1,400.00	\$1,400.00
One foreman laborer, at \$4 per diem.....	1,252.00	1,252.00
One messenger to commandant, at \$2 per diem.....	626.00	602.00
One messenger, at \$2 per diem.....	626.00	610.00
One mail messenger, at \$2 per diem, including Sundays.....	730.00	730.00
One writer.....	1,017.25	1,017.25
One draftsman, at \$5 per diem.....	1,565.00	47.50
One master of tugs.....	1,200.00	1,200.00
One electrician.....	1,400.00	1,400.00
Total.....	9,816.25	8,258.75
KEY WEST, FLA.		
One mail messenger.....	600.00	600.00
LEAGUE ISLAND, PA.		
One clerk.....	1,400.00	1,400.00
One writer and telegraph operator.....	1,000.00	1,000.00
One messenger, at \$2 per diem.....	626.00	626.00
One foreman laborer, at \$4 per diem.....	1,252.00	1,248.00
One master of tugs.....	1,200.00	1,200.00
One draftsman, at \$5 per diem.....	1,565.00	1,565.00
One electrician.....	1,200.00	1,020.00
One mail messenger, at \$2 per diem, including Sundays.....	730.00	724.00
One master of tugs.....	1,000.00	969.30
Total.....	9,973.00	9,752.30
MARE ISLAND, CAL.		
One clerk.....	1,400.00	1,400.00
One writer.....	1,017.25	1,017.25
One foreman mason.....	1,878.00	1,875.00
One foreman laborer.....	1,721.50	1,721.50

No. 4.—Detailed report from navy-yards and stations of expenditures under appropriation
 "Civil establishment, Yards and Docks," etc.—Continued.

Navy-yard, rating, and rate of pay.	Amount appropriated.	Amount expended.
MARE ISLAND, CAL.—continued.		
One pilot.....	\$1,500.00	\$1,500.00
One draftsman, at \$5 per diem.....	1,565.00	1,535.00
One mail messenger, at \$2 per diem, including Sundays.....	730.00	709.00
One messenger, at \$2 per diem.....	626.00	626.00
One electrician.....	1,400.00	1,400.00
One quartermaster joiner, at \$4.56 per diem.....	1,427.28	1,427.28
One telegraph operator, at \$3.28 per diem.....	1,026.64	1,020.08
Total.....	14,291.67	14,231.11
NEW YORK, N. Y.		
One clerk.....	1,400.00	1,400.00
One writer.....	1,017.25	1,017.25
One yard pilot.....	2,000.00	2,000.00
Two masters of tugs, at \$1,500 each.....	3,000.00	2,987.67
Two writers, at \$900 each.....	1,800.00	1,800.00
One foreman laborer, at \$4.50 per diem.....	1,408.50	1,404.56
One mail messenger, at \$2 per diem, including Sundays.....	730.00	730.00
Two messengers, at \$2.25 per diem each.....	1,408.50	1,392.75
One draftsman, at \$5 per diem.....	1,565.00	1,560.00
One quartermaster, at \$3 per diem.....	939.00	920.24
One superintendent of teams or quartermaster, at \$4 per diem.....	1,252.00	1,248.00
One messenger to commandant, at \$2.25 per diem, including Sundays.....	821.25	821.25
One messenger, Yards and Docks, at \$2.25 per diem.....	704.25	644.61
One stenographer and typewriter, at \$3.26 per diem.....	1,020.38	1,020.38
One electrician.....	1,400.00	1,400.00
One bookkeeper or accountant.....	1,200.00	1,200.00
Total.....	21,666.13	21,546.71
NORFOLK, VA.		
One clerk.....	1,400.00	1,400.00
One writer.....	1,017.25	1,017.25
One writer.....	1,000.00	1,000.00
One foreman laborer, at \$4 per diem.....	1,252.00	1,252.00
One electrician.....	1,200.00	1,116.67
One mail messenger, at \$2 per diem, including Sundays.....	730.00	656.00
Two messengers, at \$2 per diem each.....	1,252.00	1,248.00
One pilot, at \$2.26 per diem.....	707.38	684.78
One master of tugs.....	1,200.00	1,173.33
One draftsman.....	1,500.00	1,408.33
One bookkeeper.....	1,200.00	1,200.00
Total.....	12,458.63	12,156.36
PENSACOLA, FLA.		
One clerk.....	1,200.00	1,200.00
One mail messenger, at \$2 per diem, including Sundays.....	730.00	730.00
Total.....	1,930.00	1,930.00
PORT ROYAL, S. C.		
One clerk.....	1,200.00	1,200.00
One rodman and inspector, at \$3 per diem.....	939.00	934.50
One messenger and janitor, at \$1.50 per diem, including Sundays.....	547.50	495.00
One master of tugs.....	1,200.00	1,200.00
One mail messenger, at \$2 per diem, including Sundays.....	730.00	716.00
One telegraph operator, at \$2 per diem, including Sundays.....	730.00	652.00
One electrician.....	1,200.00	1,176.08
Total.....	6,546.50	6,373.58
PORTSMOUTH, N. H.		
One clerk.....	1,400.00	1,400.00
One mail messenger, at \$2 per diem, including Sundays.....	730.00	730.00
One messenger.....	600.00	600.00
One foreman laborer and head teamster, at \$4 per diem, including Sundays.....	1,460.00	1,419.50
One janitor.....	600.00	561.66
One pilot, at \$3 per diem, including Sundays.....	1,095.00	1,092.00
One draftsman, at \$4 per diem.....	1,252.00	1,204.00
One electrician.....	1,200.00	1,200.00
Total.....	8,337.00	8,207.16

No. 4.—*Detailed report from navy-yards and stations of expenditures under appropriation "Civil establishment, Yards and Docks," etc.—Continued.*

Navy-yard, rating, and rate of pay.	Amount appropriated.	Amount expended.
PUGET SOUND, WASH.		
One clerk	\$1,200.00	\$1,200.00
One draftsman	1,565.00	1,565.00
One messenger and janitor, at \$1.76 per diem, including Sundays	642.40	637.12
One master of tugs	1,200.00	1,200.00
One copyist	900.00	900.00
One electrician	1,200.00	
Total	6,707.40	5,502.12
SACKETTS HARBOR, N. Y.		
One ship keeper	365.00	365.00
WASHINGTON, D. C.		
One clerk	1,400.00	1,400.00
One messenger, at \$2 per diem	626.00	620.00
One foreman laborer, at \$4 per diem	1,252.00	1,252.00
One electrician	1,400.00	1,400.00
One writer	1,017.25	1,017.25
Total	5,695.25	5,689.25
SAN JUAN, P. R.		
One clerk	1,200.00	660.00
One writer, commandant's office	960.00	304.00
One mail messenger	420.00	140.00
Total	2,580.00	1,104.00
HAWAII.		
One writer, at \$3.25 per diem	1,017.25	
One messenger, at \$2 per diem, including Sundays	730.00	556.00
Total	1,747.25	556.00
CAVITE, P. I.		
One clerk	1,200.00	973.33
One time clerk	375.00	
One writer	255.00	
One messenger	185.00	
One messenger	150.00	
Total	2,165.00	973.33
Grand total	104,879.04	97,245.67

No. 5.—*Report of expenditures under appropriation for salaries for the Bureau of Yards and Docks during the fiscal year ended June 30, 1902.*

Rating and pay of—	Amount appropriated.	Amount expended.
Chief clerk, at \$2,000 per annum	\$2,000.00	\$2,000.00
Draftsman and clerk, at \$1,800 per annum	1,800.00	1,800.00
Clerk of class 3, at \$1,600 per annum	1,600.00	1,600.00
Two clerks of class 2, at \$1,400 per annum	2,800.00	2,508.85
Clerk of class 1, at \$1,200 per annum	1,200.00	1,200.00
Assistant messenger, at \$720 per annum	720.00	720.00
Laborer, at \$660 per annum	660.00	660.00
Total	10,780.00	10,488.85

No. 6.—Statement of appropriations for yards and docks, showing amounts appropriated, obligated, and remaining unobligated June 30, 1902—Continued.

Appropriation.	Appropriated.	Obligated.	Unobligated.
Navy-yard, Mare Island, Cal.—Continued.			
Act July 1, 1902—Continued.			
Improvements to building numbered 45	\$2,000.00	.....	\$2,000.00
Electric plant, extension	15,000.00	.....	15,000.00
Telephone system, extension	1,000.00	.....	1,000.00
Boiler and pump for new caisson	3,500.00	.....	3,500.00
Improvements to building for storing and handling guns	6,000.00	.....	6,000.00
To complete sawmill, boiler house, and steel chimney	2,000.00	.....	2,000.00
Total	2,629,710.00	\$1,955,475.57	674,234.43
Naval station, Puget Sound, Wash.:			
Act May 4, 1898—			
Steam capstans for dry dock	6,325.00	2,463.65	3,861.35
Steam engineering shop and boiler house	56,000.00	55,911.67	88.33
Dredging	20,000.00	18,000.00	2,000.00
Quay wall	25,000.00	25,000.00	.....
Act Mar. 3, 1899—			
Extension of boiler room and steam plant for yards and docks	20,000.00	20,000.00	.....
Yard railway	3,500.00	3,500.00	.....
Act June 7, 1900—			
Water system, additions	12,000.00	11,851.20	148.80
Fence about station, entrance gate, and guard quarters	15,000.00	14,954.44	45.56
Sewers	2,500.00	2,500.00	.....
Angle, plate, and smithery shed	12,000.00	12,000.00	.....
Wharf crane	a 65,000.00	64,165.55	834.45
Fire-protection system, additions	7,000.00	6,780.30	219.70
Composition fittings for dry dock	5,000.00	4,980.83	19.17
Dry-dock pumping plant, improvements	2,165.00	2,152.18	12.82
Electric-light plant, to complete	7,000.00	7,000.00	.....
Ordnance shop and magazine buildings	80,000.00	58,044.20	21,955.80
Act Mar. 3, 1901—			
Sewers, extensions	4,000.00	2,794.92	1,205.08
Coal shed and appliances	a 115,000.00	496.47	114,503.53
Sick quarters	7,000.00	4,405.60	2,594.40
Carpenter and joiner shop for yards and docks	10,000.00	9,971.70	28.30
Machinery for carpenter and joiner shop	3,000.00	1,590.41	1,409.59
Extension of dry-dock boiler plant	20,000.00	11,794.76	8,205.24
Stable and tool shed	6,500.00	5,924.45	575.55
Fire-protection system	10,000.00	9,487.71	512.29
Electric-light plant, extensions	5,000.00	4,905.52	94.48
Telephone system, extensions	3,000.00	2,433.00	567.00
Railroad and equipment, extension	2,000.00	1,999.73	.27
Clearing and stumping	5,000.00	4,981.25	18.75
Roadway about dry dock	6,000.00	5,977.81	22.19
Dolphins	1,000.00	1,000.00	.....
New skylight for construction and repair shop	4,000.00	.....	4,000.00
Joiner shop for construction and repair	70,000.00	65,981.10	4,015.90
Water-closets and wash room for steam engineering	2,000.00	2,000.00	.....
Floor for steam engineering shop	10,000.00	8,248.29	1,751.71
Storehouse for high explosives, ordnance	5,000.00	.....	5,000.00
Wharf crane for ordnance	1,500.00	1,025.00	475.00
Quarters for gunner	3,000.00	3,000.00	.....
To continue grading	a 30,000.00	30,000.00	.....
Act July 1, 1902—			
Sewers, extensions	5,000.00	.....	5,000.00
To continue grading	30,000.00	.....	30,000.00
Coal shed and appliances, including pier extensions	150,000.00	.....	150,000.00
Fire-protection system, extensions	3,500.00	.....	3,500.00
Electric-light plant, extensions	20,000.00	.....	20,000.00
Telephone system, extensions	2,000.00	.....	2,000.00
Railroad and equipment, extensions	20,000.00	.....	20,000.00
Purchase of land	4,000.00	.....	4,000.00
Smithery for construction and repair, extension	40,000.00	.....	40,000.00
Plate-metal shop for construction and repair	50,000.00	.....	50,000.00
Addition to storehouse for supplies and accounts	50,000.00	.....	50,000.00
Boat shop for construction and repair (to cost \$150,000)	50,000.00	.....	50,000.00
Water-closets	2,500.00	.....	2,500.00
Power house for construction and repair	70,000.00	.....	70,000.00
Storehouse for steel	36,000.00	.....	36,000.00
Piers	75,000.00	.....	75,000.00
Roads and walks	15,000.00	.....	15,000.00
Water system, extensions	5,000.00	.....	5,000.00
Locomotive crane	8,500.00	.....	8,500.00

a Includes prior appropriation for same object.

REPORT OF THE SECRETARY OF THE NAVY.

No. 6.—*Statement of appropriations for yards and docks, showing amounts appropriated, obligated, and remaining unobligated June 30, 1902—Continued.*

Appropriation.	Appropriated.	Obligated.	Unobligated.
Naval station, Puget Sound, Wash.—Continued.			
Act July 1, 1902—Continued.			
Foundry and coppersmiths' shop (to cost \$100,000).....	\$50,000.00	.....	\$50,000.00
Boiler and blacksmith shop (to cost \$100,000)	50,000.00	.....	50,000.00
Heating system, extensions	4,000.00	.....	4,000.00
Boiler stack and fittings for equipment shop.....	a 95,000.00	\$85,147.42	9,852.58
Quay wall	60,000.00	.....	60,000.00
Total	1,556,990.00	572,472.16	984,517.84
Naval station, San Juan, P. R.:			
Act June 7, 1900—			
Pier	15,000.00	14,956.26	43.74
Dredging	2,000.00	1,760.00	240.00
Electric-light plant.....	5,000.00	4,865.67	134.33
Act Mar. 3, 1901—			
Coaling facilities, extensions	a 70,000.00	2,718.91	67,281.09
Act July 1, 1902—			
Coaling facilities, extensions.....	50,000.00	.....	50,000.00
Total	142,000.00	24,300.84	117,699.16
Naval station, Hawaii:			
Act Mar. 3, 1901—			
Machine shop	50,000.00	.....	50,000.00
Smithery and foundry	25,000.00	.....	25,000.00
Commandant's house and stables	15,000.00	7.35	14,992.65
Extending office building.....	3,000.00	2,979.55	20.45
Cottage for watchman	2,500.00	1,887.00	613.00
Grading and fencing	10,000.00	4,664.66	5,335.34
Ten-ton wharf crane	800.00	.....	800.00
Water-pipe system	1,000.00	784.20	215.80
Total	107,300.00	10,322.76	96,977.24
Naval station, Tutuila:			
Act Mar. 3, 1901—			
Coal-storage plant, extensions.....	200,000.00	152.34	199,847.66
Grading	25,000.00	2,705.99	22,294.01
Act July 1, 1902—			
One officers' quarters.....	5,000.00	.....	5,000.00
Office building	10,000.00	.....	10,000.00
Roads and walks	5,000.00	.....	5,000.00
Grading and filling	30,000.00	.....	30,000.00
Telephone system	2,000.00	.....	2,000.00
Lighthouse, Aunuu Island	1,000.00	.....	1,000.00
Waterworks and accessories.....	5,000.00	.....	5,000.00
Purchase of additional land at Samoa	35,000.00	.....	35,000.00
Total	318,000.00	2,858.33	315,141.67
Naval station, Cavite, P. I.:			
Act July 1, 1902.....			
Tools and appliances for yards and docks.....	5,000.00	.....	5,000.00
Fire-protection system and apparatus	12,000.00	.....	12,000.00
Railroad system, improvements and extensions	9,000.00	.....	9,000.00
Fitting up coal sheds.....	7,500.00	.....	7,500.00
Floating steel dry dock (to cost \$1,225,000).....	200,000.00	.....	200,000.00
Total	233,500.00	.....	233,500.00
Four dry docks:			
Acts May 4, 1898, Mar. 3, 1899, Jan. 25, 1900, June 7, 1900, Mar. 3, 1901, and July 1, 1902—			
Dry dock, Portsmouth (cost, \$1,100,000).....	4,550,000.00	1,100,000.00	.....
Dry dock, Boston (cost, \$1,100,000)		1,053,569.33	46,430.67
Dry dock, League Island (cost, \$1,175,000)		1,155,072.03	19,927.97
Dry dock, Mare Island (cost, \$1,175,000).....		1,169,643.65	5,356.35
Steel floating dock, Algiers, La.:			
Acts May 4, 1898, and June 7, 1900.....	850,000.00	819,174.03	30,825.97
Housing torpedo vessels:			
Act May 4, 1898.....	150,000.00	79,956.90	70,043.10
Dredging, Dry Tortugas, Fla.:			
Acts June 7, 1900, and Mar. 3, 1901	200,000.00	164,796.65	35,203.35
Purchase of dry dock, Habana:			
Act June 7, 1900	300,000.00	237,928.61	62,071.39
Boundary line, rifle range, and boat landing, Blythe Island, Ga.:			
Act Mar. 3, 1901	2,000.00	.....	2,000.00

a Includes prior appropriation for same object.

FOR STOREHOUSE FOR COMBUSTIBLE MATERIALS, NAVY-YARD, WASHINGTON, D. C.

Specification No. 1163. Act June 7, 1900.

Advertisement dated July 10, 1901.

Bids opened July 27, 1901. (7946-14.)

Contract No. 950, dated August 1, 1901.

Penn Bridge Company, Beaver Falls, Pa.....	^a \$2,769.00
American Bridge Company, New York, N. Y.....	2,999.00
The Champion Iron Company, Kenton, Ohio.....	3,031.74
Structural Iron and Steel Company, Baltimore, Md.....	3,500.00
Snare & Triest, Incorporated, New York, N. Y.....	3,540.00

FOR QUAY WALL BETWEEN PIERS NOS. 7 AND 8, NAVY-YARD, BOSTON, MASS.

Specification No. 1158. Act June 7, 1900.

Advertisement dated July 8, 1901.

Bids opened July 27, 1901. (8166-9.)

Contract No. 951, dated August 2, 1901.

Norcross Brothers, Boston, Mass.:

Item No. 1.....	\$3,385.00
Item No. 2.....	^a 3,948.00

Miller & Ellis, Boston, Mass.:

Item No. 1.....	6,294.00
Item No. 2.....	5,974.00

Wm. J. Lawler, Boston, Mass.:

Item No. 1.....	5,000.00
Item No. 2.....	4,150.00

FOR ONE 100-HORSEPOWER BOILER, CHIMNEY AND ACCESSORIES, NAVAL STATION, SAN JUAN, P. R.

Specification No. 1167. Act June 7, 1900.

Advertisements dated June 29, 1901.

Bids opened July 27, 1901. (8136-15.)

Contract No. 949, dated August 2, 1901.

Fitzgibbon Boiler Company, Oswego, N. Y.: Item B.....	^a \$1,995.00
Oil City Boiler Works, Oil City, Pa.: Item B.....	2,250.00
New Jersey Foundry and Machine Company, Red Bank, N. J.:	
Item C.....	4,935.00
Item D.....	2,925.00

FOR DREDGING AND REMOVING MUD, SAND, SILT, ETC., NAVY-YARD, NEW YORK, N. Y.

Specification No. 1174. Act March 3, 1901.

Advertisements dated July 16, 1901.

Bids opened August 3, 1901. (8178-11.)

Contract No. 952, dated August 9, 1901.

R. G. Packard Company, New York, N. Y.....	\$0.23 ⁷ / ₁₆
W. H. Beard Dredging Company, New York N. Y.....	.21
Henry Du Bois Sons Company, New York, N. Y.....	^a .16
Morris & Cumings Dredging Company, New York, N. Y.....	.26 ¹ / ₂

FOR REMOVING CRIB WORK, ETC., NAVY-YARD, NEW YORK, N. Y.

Specification No. 1175. Act March 3, 1901.

Advertisements dated July 15, 1901.

Bids opened August 3, 1901. (8180-7.)

Contract No. 953, dated August 9, 1901.

Morris & Cumings Dredging Company, New York, N. Y.....	\$0.67 ¹ / ₂
R. G. Packard Company, New York, N. Y.....	^a .21 ⁴ / ₁₆
W. H. Beard Dredging Company, New York, N. Y.....	.40

Accepted.

FOR CENTRAL HEATING SYSTEM, NAVY-YARD, BOSTON, MASS.

Specification No. 1169. Act March 3, 1901.

Advertisement dated July 10, 1901.

Bids opened August 3, 1901 (8174-15).

Contract No. 955, dated August 15, 1901.

The General Fire Extinguisher Company, Providence, R. I.:	
Item No. 1.....	\$26,720.00
Item No. 2.....	^a 25,850.00
Bradlee & Chapman, Boston, Mass.:	
Item No. 1.....	32,700.00
Item No. 2.....	34,800.00
Lynch & Woodward, Boston, Mass.:	
Item No. 1.....	33,179.00
Item No. 2.....	32,769.00
New York Steam Fitting Company, New York, N. Y.:	
Item No. 1.....	34,750.00
Item No. 3.....	(^b)
Evans, Almira & Co., New York, N. Y.:	
Item No. 1.....	33,900.00
Item No. 3.....	(^c)
Francis A. Williams, New York, N. Y.: Item No. 1.....	30,962.00

FOR 120-TON FLOATING DERRICK, NAVY-YARD, NORFOLK, VA.

Specification No. 1171. Act March 3, 1899.

Advertisement dated July 11, 1901.

Bids opened August 17, 1901 (8189-27).

Contract No. 957, dated September 18, 1901.

Brown Hoisting Machinery Company, Incorporated, Cleveland, Ohio:	
Item No. 1.....	\$69,950.00
Snare & Triest, Incorporated, New York, N. Y.:	
Item No. 1.....	^a 64,950.00
Item No. 2, deduct.....	1,000.00
Item No. 3, deduct.....	1,500.00
Merritt & Chapman Derrick and Wrecking Company, New York, N. Y.:	
Item No. 1.....	69,500.00

FOR COAL STORAGE PLANT, NAVY-YARD, PORTSMOUTH, N. H.

Specification No. 1142. Acts May 4, 1898, and March 3, 1899.

Advertisement dated July 11, 1901.

Bids opened August 24, 1901. (7892-103.)

Contract No. 960, dated September 14, 1901.

Hoffman Engineering and Contracting Company, Philadelphia, Pa.:	
Item No. 1.....	\$138,500.00
Alternative.....	139,850.00
Do.....	146,350.00
Do.....	146,350.00
Alternative, add.....	7.50
Alternative.....	134,850.00
Do.....	134,850.00
Penn Bridge Company, Beaver Falls, Pa.:	
Item No. 1.....	98,000.00
Alternative.....	98,000.00
Do.....	98,000.00
Do.....	11,000.00
Augustus Smith, New York, N. Y.:	
Item No. 1.....	98,151.00
Alternative.....	95,681.00
Do.....	98,151.00
Do.....	95,681.00
Do.....	4,815.00

^a Accepted.^b Four months.^c Three months.

Charles F. Curwen, Salem, Mass.:

Item No. 1.....	\$6,170.00
Item No. 2.....	2,990.00
Item No. 3.....	3,180.00

FOR SHOP FOR EQUIPMENT, NAVY-YARD, PUGET SOUND, WASH.

Specification No. 1201. Act June 7, 1900.

Advertisement, dated November 21, 1901.

Bids opened January 4, 1902. (7909-82.)

Contract No. 988, dated February 1, 1902.

M. J. Carkeek, Seattle, Wash.: Item No. 5..... \$78,450.00

Puget Sound Bridge and Dredging Company, Seattle, Wash.:

Item No. 1.....	88,180.00
Item No. 2.....	81,650.00
Item No. 3.....	75,488.00
Item No. 4.....	71,034.00
Item No. 5.....	79,700.00

Garretty & Co., Seattle, Wash.: Item No. 5..... 79,788.00

W. R. Nichols, Tacoma, Wash.:

Item No. 1.....	93,500.00
Item No. 2.....	87,200.00
Item No. 3.....	78,300.00
Item No. 4.....	72,700.00

Cotton Bros. & Co., Oakland, Cal.:

Item No. 1.....	87,321.00
Item No. 2.....	^a 81,271.00
Item No. 3.....	72,800.00
Item No. 4.....	68,140.00

FOR FIRE-ALARM SYSTEM, NAVY-YARD, PORTSMOUTH, N. H.

Specification No. 1210. Act June 7, 1900.

Advertisement, dated December 4, 1901.

Bid opened January 4, 1902.

Contract No. 979, dated January 15, 1902.

Gamewell Fire Alarm Company, New York, N. Y.: Item No. 1..... ^a \$7,485.00

FOR GUNNERS' QUARTERS, NAVY-YARD, PUGET SOUND, WASH.

Specification No. 1207. Act March 3, 1901.

Advertisement dated December 4, 1901.

Bids opened January 11, 1902. (8215-8.)

Contract No. 983, dated January 24, 1902.

W. R. Nichols, Tacoma, Wash.: Item No. 1..... ^a \$2,865.00

Garretty & Co., Seattle, Wash.: Item No. 2..... 2,900.00

FOR STEEL WORK FOR FIREPROOF STOREHOUSE FOR COMBUSTIBLES, NAVY-YARD, WASHINGTON, D. C.

Specification No. 1211. Act March 3, 1901.

Advertisement dated December 19, 1901.

Bids opened January 11, 1902. (8194-20.)

Contract No. 980, dated January 17, 1902.

American Bridge Company, New York, N. Y.: Item No. 1..... \$3,179.00

Champion Iron Company, Kenton, Ohio: Item No. 1..... 3,668.54

John Kenny, jr., New York, N. Y.: Item No. 1..... 3,450.00

Structural Iron and Steel Company, Baltimore, Md.:

Item No. 1..... ^a 3,148.00

Alternative..... 3,948.00

Snare & Triest, Incorporated, New York, N. Y.: Item No. 1..... 3,260.00

Penn Bridge Company, Beaver Falls, Pa.: Item No. 1..... 3,387.00

New Jersey Foundry and Machine Company, New York, N. Y.: Item No. 1..... 3,496.00

^a Accepted.

FOR DREDGING NAVY-YARD, BOSTON, MASS.

Specification No. 1216. Act March 3, 1901.

Advertisement dated December 19, 1901.

Bids opened January 11, 1902. (8167-7.)

Contract No. 981, dated January 21, 1902.

Eastern Dredging Company, Portland, Me.: Item No. 1, per cubic yard. ^a \$0.27½

FOR TWO COAL-HOISTING TOWERS AND MACHINERY, NAVAL STATION, SAN JUAN, P. R.

Specification No. 1208. Acts June 17, 1900, and March 3, 1901.

Advertisement dated November 21, 1901.

Bids opened January 18, 1902. (7440-95.)

All bids rejected.

Boston Bridge Works, Boston, Mass: Item No. 2	\$23,000.00
C. W. Hunt Company, New York, N. Y.:	
Item No. 2 (a)	19,600.00
Item No. 2 (b)	200.00
Item No. 2 (c)	17,600.00
Item No. 2 (d)	5,600.00
Item No. 2 (e)	1,260.00
Item No. 2 (f)	1,600.00
Item No. 2 (g)	14,391.00
Snare & Triest, Incorporated, New York, N. Y.:	
Item No. 1	18,710.00
Item No. 2	23,300.00

FOR AN ELEVATED CABLE RAILWAY, NAVAL STATION, SAN JUAN P. R.

Specification No. 1217. Acts June 7, 1900, and March 3, 1901.

Advertisement dated December 4, 1901.

Bids opened January 18, 1902. (8305-19.)

All bids rejected.

United Telpherage Company, Jersey City, N. J.:	
Item No. 1 (a)	\$37,490.00
Item No. 1 (b)	2,925.00
Item No. 1 (c)	50,870.00
Item No. 1 (d)	3,792.00
C. W. Hunt Company, New York, N. Y.:	
Item No. 1	9,300.00
Alternative	360.00
Snare & Triest, Incorporated, New York, N. Y.: Item No. 1	13,800.00

FOR WORKSHOP AND BOILER HOUSE FOR ORDNANCE, NAVY-YARD, LEAGUE ISLAND, PA.

Specification No. 1205. Act March 3, 1901.

Advertisement dated December 19, 1901.

Bids opened January 18, 1902. (8333-1.)

Contract No. 985, dated February 3, 1902.

Randolph & Baer, Philadelphia, Pa.:	
Item No. 1	\$44,799.00
Item No. 2	42,149.00
Item No. 3	(b)
Henderson & Co., Limited, Philadelphia, Pa.:	
Item No. 1	34,773.00
Item No. 2	32,573.00
Item No. 3	(b)
Item No. 5	29,333.00
Hoffman Engineering and Contracting Company, Philadelphia, Pa.:	
Item No. 1	42,000.00
Item No. 2	39,000.00
Item No. 3	(c)
The Penn Erecting Company, Philadelphia, Pa.:	
Item No. 1	^a 33,425.00
Item No. 2	30,725.00
Item No. 3	(d)
Item No. 5	29,625.00

^a Accepted.^b Ten months.^c Eight months.^d Six months.

Wm. H. Healy, San Francisco, Cal.:

Item No. 1.....	\$98,103.00
Item No. 2.....	89,834.00

Cotton Bros. & Co., Oakland, Cal.:

Item No. 1.....	102,336.00
Item No. 2.....	92,216.00

FOR SHIPWRIGHTS' SHOP, NAVY-YARD, MARE ISLAND, CAL.

Specification No. 1222. Act March 3, 1899.

Advertisement dated April 24, 1902.

Bids opened June 7, 1902. (7683-13.)

Contract No. 1003, dated June 19, 1902.

W. N. Concanon, San Francisco, Cal.:

Item No. 1.....	\$62,345.00
Item No. 2.....	61,845.00

Clark & Henery, Stockton, Cal.:

Item No. 1.....	64,775.00
Item No. 2.....	65,075.00
Item No. 3.....	61,275.00
Item No. 4.....	61,575.00

Wm. H. Healy, San Francisco, Cal.:

Item No. 1.....	^a 61,633.00
Item No. 2.....	61,933.00

FOR STEAM HEATING IN ELECTRIC WORKSHOP AND STOREHOUSE, NAVY-YARD, LEAGUE ISLAND, PA.

Specification No. 1233. Act March 3, 1901.

Advertisement dated May 12, 1902.

Bids opened June 7, 1902. (8404-8.)

Contract No. 1002, dated June 13, 1902.

Harris & Algor, Camden, N. J.: Item No. 1.....	\$5,119.00
S. Faith & Co., Philadelphia, Pa.: Item No. 1.....	5,670.00
E. Rutzler, New York, N. Y.: Item No. 1.....	5,541.00
Edward Joy, Syracuse, N. Y.: Item No. 1.....	5,685.00
Harry A. Miller, Wilmington, Del.: Item No. 1.....	^a 4,745.00
Frank Dobson, New York, N. Y.: Item No. 1.....	5,965.00
Patrick Gormley, Philadelphia, Pa.: Item No. 1.....	5,897.00
J. W. Cuff & Co., Philadelphia, Pa.:	
Item No. 1.....	4,840.00
Item No. 3.....	(^b)
David R. Burns, Philadelphia, Pa.: Item No. 1.....	5,680.00

FOR PATTERN SHOP AND STOREHOUSE FOR STEAM ENGINEERING, NAVY-YARD, NORFOLK, VA.

Specification No. 1238. Act March 3, 1901.

Advertisement dated June 5, 1902.

Bids opened June 21, 1902. (8196-10.)

Contract No. 1004, dated July 20, 1902.

J. H. Brinson, Hampton, Va.: Item No. 1.....	^a \$25,740.00
J. W. Taliaferro & Co., Brooklyn, N. Y.:	
Item No. 1.....	26,387.00
Item No. 2.....	26,867.00
Penn Bridge Company, Beaver Falls, Pa.: Item No. 1.....	25,867.00
Grant Wilkins, Atlanta, Ga.:	
Item No. 1.....	28,500.00
Item No. 2.....	27,300.00
Item No. 3.....	25,200.00
Frank Pidgeon, Saugerties, N. Y.:	
Item No. 1.....	28,792.00
Item No. 3.....	26,479.00
Item No. 4.....	(^c)

^a Accepted.^b Forty-eight days.^c Nine months.

No. 8.—*Summary statement of estimates received from navy-yards and stations for the fiscal year ending June 30, 1904.*

Navy-yards and stations.	Appropriations.				
	Yard improve-ments.	Repairs and preservation.	Mainte-nance.	Civil estab-lishment.	Total.
Boston, Mass	\$2,968,200.00	\$107,500.00	\$88,850.00	\$14,648.49	\$3,179,198.49
Cavite, P. I.	1,220,000.00	77,000.00	70,700.00	11,615.75	1,379,315.75
Charleston, S. C.	2,453,500.00	.....	19,800.00	13,351.72	2,486,651.72
Eric, Pa. ....	.....	.....	500.00	.....	500.00
Guam, L. I.	6,800.00	9,250.00	30,763.16	.....	46,813.16
Hawaii, H. I.	5,071,000.00	5,800.00	8,135.00	11,359.00	5,096,294.00
Key West, Fla.	103,000.00	16,000.00	13,000.00	1,800.00	133,800.00
League Island, Pa.	2,347,700.00	52,800.00	70,730.00	14,513.12	2,485,743.12
Mare Island, Cal.	1,442,000.00	62,500.00	106,200.00	16,994.39	1,627,694.39
New London, Conn. ....	.....	2,500.00	6,200.00	1,400.00	10,100.00
New Orleans, La.	2,092,800.00	17,100.00	61,900.00	9,600.00	2,181,400.00
New York, N. Y.	4,273,000.00	200,000.00	170,000.00	34,618.14	4,677,618.14
Norfolk, Va.	1,205,700.00	55,500.00	61,250.00	18,255.09	1,340,705.09
Pensacola, Fla.	420,500.00	52,532.27	30,134.57	3,337.76	506,504.60
Port Royal, S. C.	4,808,980.00	24,800.00	20,000.00	13,167.54	4,866,947.54
Portsmouth, N. H.	2,270,500.00	73,500.00	77,375.00	20,467.24	2,441,842.24
Puget Sound, Wash.	1,795,250.00	55,500.00	76,500.00	12,886.00	1,940,136.00
Sacketts Harbor, N. Y. ....	.....	.....	.....	365.00	365.00
San Juan, P. R.	3,466,000.00	11,400.00	17,000.00	14,100.00	3,508,500.00
Tutuila, S. I.	195,730.00	5,700.00	10,786.00	4,000.00	216,216.00
Washington, D. C.	946,118.05	63,700.00	41,050.00	7,128.24	1,057,996.29
Total	37,086,778.05	893,082.27	980,873.73	223,607.48	39,184,381.53

No. 9.—*Detailed statement of estimates received from navy-yards and stations for works of improvement for the fiscal year ending June 30, 1904.*

Yards, stations, and objects.	Estimates.	Total.
BOSTON, MASS., NAVY-YARD.		
Grading	\$30,000.00	
Paving	100,000.00	
Sewers	25,000.00	
Drains	30,000.00	
Railroad track	30,000.00	
Quay wall	396,200.00	
Fitting-out basin	950,000.00	
Underground conduit	40,000.00	
Pile driver	6,500.00	
Tools, yards and docks department	25,000.00	
Extension of electric system	25,000.00	
Repairs and extension to dry dock No. 1	200,000.00	
Increase of facilities for general storekeeper	150,000.00	
Extension of building No. 107	50,000.00	
Water-closets	30,000.00	
Extension of naval prison	20,000.00	
House for electrician	5,000.00	
House for the navy-yard guard	2,500.00	
Administration building	50,000.00	
Bachelor quarters	50,000.00	
Foundry for construction and repair department	77,000.00	
Construction and repair paint shop	35,000.00	
Construction and repair boat shop	200,000.00	
Storehouse for oil	70,000.00	
Steel shears	15,000.00	
Removal of ship houses, buildings 68 and 71	1,000.00	
Coal shed for equipment	6,000.00	
Extension of building No. 39	205,000.00	
Roundhouse and car shed	20,000.00	
Railway equipment	4,000.00	
Refitting and improving steam-engineering buildings Nos. 42 and 43	80,000.00	
Central heating system	40,000.00	
		\$2,968,200.00
CAVITE, P. I., NAVAL STATION.		
Survey for site of new magazine	10,000.00	
Removal of Fort San Felipe	20,000.00	
Removal of Guadalupe bastion	5,000.00	
Extension of yard westward	75,000.00	
Extension of sea walls	150,000.00	
Dredging	50,000.00	
Electric lighting	45,000.00	
Fire system	20,000.00	

BUREAU OF YARDS AND DOCKS.

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No. 9.—Detailed statement of estimates received from navy-yards and stations for works of improvement for the fiscal year ending June 30, 1904—Continued.

Yards, stations, and objects.	Estimates.	Total.
CAVITE, P. I., NAVAL STATION—continued.		
Yard water supply	\$20,000.00	
Yards and docks power and pump house	50,000.00	
Yards and docks shop and office building	90,000.00	
Purchase of tools	20,000.00	
Ordnance shop and storehouses	90,000.00	
Storehouse for naval supplies	150,000.00	
Pillar wharf crane	10,000.00	
Steel cargo lighter for yards and docks	45,000.00	
Refrigerating plant	200,000.00	
Officers' quarters	100,000.00	
Rearrangement of the yard	20,000.00	
Yard ferryboat	50,000.00	
		\$1,220,000.00
CHARLESTON, S. C., NAVY-YARD.		
Dry dock No. 1, for continuing work	400,000.00	
Dry dock No. 2, stone and concrete	1,000,000.00	
Quarters for captain of yard	10,000.00	
Quarters for medical officer	10,000.00	
Quarters for naval constructor	10,000.00	
Quarters for steam engineer	10,000.00	
Quarters for equipment officer	10,000.00	
Quarters for ordnance officer	10,000.00	
Quarters for pay officer	10,000.00	
Quay wall	250,000.00	
Dredging	60,000.00	
Landings and wharves	75,000.00	
Grading, paving, and drainage	73,500.00	
Yard railway	15,000.00	
Conduit for water and steam pipes, wires, etc.	50,000.00	
Fire-protection system	40,000.00	
Water-supply system	12,000.00	
Yard wall	35,000.00	
Electric-light wiring, etc	8,000.00	
Central heating system	12,500.00	
Addition to storehouse	60,000.00	
Yards and docks offices, supplies, tools, etc.	85,000.00	
Commandant's stable	3,000.00	
Railway equipment	10,000.00	
Telephone system	4,500.00	
150-ton crane and foundation	125,000.00	
Latrines	5,000.00	
Powerhouse and electric-light plant for yards and docks (building alone) ..	60,000.00	
		2,453,500.00
ISLAND OF GUAM NAVAL STATION.		
General storekeeper's warehouse and paymaster's storeroom	5,000.00	
Lighter for transferring stores from ship to Pitti, 33 by 15 by 5 feet	1,800.00	
		6,800.00
HAWAII NAVAL STATION.		
Five sets officers' quarters	40,000.00	
Three sets warrant officers' quarters	15,000.00	
Three artesian wells	18,000.00	
Pumping plant, complete	50,000.00	
Water-pipe system and standpipe	40,000.00	
Sewer system	40,000.00	
Two storehouses	300,000.00	
Oil storehouse	50,000.00	
Machine shop	150,000.00	
Foundry	50,000.00	
Yards and docks shop	150,000.00	
Two wharves	150,000.00	
Grading and paving	100,000.00	
Dredging	100,000.00	
Two dry docks	3,250,000.00	
Electric plant	150,000.00	
Quay wall	200,000.00	
Trees, etc	10,000.00	
Barn and cart sheds	28,000.00	
Office building	20,000.00	
Office for civil engineer	5,000.00	
Tools and appliances	45,000.00	
Watchman's house and quarters	10,000.00	
Railroad and rolling stock	100,000.00	
		5,071,000.00
KEY WEST, FLA., NAVAL STATION.		
Quay wall to continue	50,000.00	
Power plant building	38,000.00	
Marine railway	15,000.00	
		103,000.00

REPORT OF THE SECRETARY OF THE NAVY.

No. 9.—*Detailed statement of estimates received from navy-yards and stations for works of improvement for the fiscal year ending June 30, 1904—Continued.*

Yards, stations, and objects.	Estimates.	Total.
LEAGUE ISLAND, PA., NAVY-YARD.		
Extension of reserve basin, to continue.....	\$100,000.00	
Retaining wall about reserve basin, to continue.....	125,000.00	
Grading and paving, to continue.....	40,000.00	
Electric light, heating, and power plant.....	75,000.00	
Extension of railroad tracks about yard, to continue.....	35,000.00	
Extension of sewer system.....	25,000.00	
Commandant's quarters.....	25,000.00	
Officers' quarters.....	20,000.00	
Quarters for junior officers.....	15,000.00	
Outbuildings and fences for officers' quarters.....	8,000.00	
Yard trolley system, to extend.....	20,000.00	
Workshop and storehouse for the department of yards and docks.....	80,000.00	
Sawmill building for the department of construction and repair.....	70,000.00	
New office building for construction and repair.....	60,000.00	
Boat shop for construction and repair.....	40,000.00	
Repairs to building No. 7.....	40,000.00	
Yard, stables, carriage, fire engine, and trolley house.....	65,000.00	
Coal storage and coal-handling plant.....	300,000.00	
Extension of locomotive crane track.....	54,000.00	
Lumber sheds and yard.....	50,000.00	
Administration building for steam engineering.....	50,000.00	
Entrance gate, guard house, and office for the board of labor employment.....	100,000.00	
Dredging and filling in along Delaware water front, to continue.....	100,000.00	
Continuation of sea wall west of Broad street and east of dry dock No. 2.....	100,000.00	
Surgeon's office and yard dispensary.....	18,000.00	
Extension of water system.....	12,000.00	
Improvement of grounds.....	5,000.00	
Wall about yard.....	50,000.00	
Barracks for enlisted men, to take the place of receiving ship.....	300,000.00	
Machinery for the department of yards and docks.....	5,000.00	
Pitch house and oakum left for the department of construction and repair.....	5,200.00	
Building slip for the construction of ships.....	210,000.00	
Office for yard paymaster.....	12,000.00	
Floating derrick.....	80,000.00	
Underground conduit system.....	12,000.00	
Fireproof vault for building No. 1, storehouse and offices for yards and docks.....	2,000.00	
Additional plumbing for officers' quarters.....	1,500.00	
Houses over 2 artesian-well pumps.....	3,000.00	
Extension of fire-protection system.....	35,000.00	
		\$2,347,700.00
MARE ISLAND, CAL., NAVY-YARD.		
Wet basin.....	160,000.00	
Traveling crane and track.....	200,000.00	
Sewers and closets.....	10,000.00	
Paving and sidewalks.....	50,000.00	
Railroad, repair, extension, and equipment.....	25,000.00	
To complete medical dispensary.....	2,000.00	
Repairing 40-ton crane track around stone dry dock.....	16,000.00	
Completing and extending timber storage.....	4,000.00	
Chemical laboratory.....	4,500.00	
To complete light and power station.....	50,000.00	
Pile driver.....	5,000.00	
Building for metal storage.....	25,000.00	
Moving boat shelter, building No. 113.....	12,000.00	
Completing building plant for department of steam engineering.....	150,000.00	
Storage tanks for fuel oil.....	12,000.00	
Steam heating.....	10,000.00	
Underground conduit and electrical extensions.....	25,000.00	
Extending and completing steel freight shed.....	7,500.00	
Extending equipment workshop.....	30,000.00	
Tools.....	10,000.00	
Capstans.....	18,000.00	
Grading yard.....	15,000.00	
Marine railway.....	8,000.00	
Observatory.....	20,000.00	
Fixtures for chapel.....	1,000.00	
Locomotive crane.....	12,000.00	
Second story floor, building No. 53.....	5,000.00	
First-story floor, building No. 51.....	5,000.00	
Jetty.....	50,000.00	
Quay wall.....	50,000.00	
Dredging.....	50,000.00	
Storehouse for department of supplies and accounts.....	100,000.00	
		1,442,000.00

BUREAU OF YARDS AND DOCKS.

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No. 9.—*Detailed statement of estimates received from navy-yards and stations for works of improvement for the fiscal year ending June 30, 1904—Continued.*

Yards, stations, and objects.	Estimates.	Total.
PORTSMOUTH, N. H., NAVY-YARD.		
Four timber dry docks, to complete.....		
Removal of Hendersons Point, to complete.....	\$549,000.00	
Quay wall, to extend.....	200,000.00	
Grading, to continue.....	75,000.00	
Locomotive crane and track, to complete.....	50,000.00	
Floating dock to replace wooden dry dock.....	400,000.00	
Piers and slips, to extend.....	75,000.00	
Electric plant, extension.....	15,000.00	
Central heating plant, extension.....	15,000.00	
Steel plant building for construction and repair, to complete.....	100,000.00	
Railroad and rolling stock, additions.....	15,000.00	
Sewer systems, extensions.....	5,000.00	
Water systems, extensions.....	5,000.00	
Crematory.....	8,000.00	
Dumping scow.....	15,000.00	
Blasting in front of quay wall.....	25,000.00	
Walks and pavements.....	20,000.00	
Cleaning ponds.....	5,000.00	
Lunch room for yard workmen.....	5,000.00	
Locomotive and car shed.....	20,000.00	
Fences around quarters.....	5,000.00	
Ferry house and landing.....	5,000.00	
New gate and entrance house to yard.....	25,000.00	
Tools for yards and docks.....	10,000.00	
Stables to replace buildings Nos. 36, 37, 38, and 39.....	33,000.00	
New quarters for commandant.....	19,000.00	
New quarters for naval constructor.....	8,500.00	
Extension of building No. 64.....	8,000.00	
Breakwater and landing stage, near building No. 60.....	15,000.00	
Additional story and new roof for building No. 42.....	30,000.00	
Pipe shop and tool storehouse for yards and docks.....	30,000.00	
Yard pay office and board rooms.....	20,000.00	
Outbuildings for new officers' quarters.....	6,000.00	
Storehouse for oils.....	35,000.00	
Timber shed.....	32,000.00	
Storehouse for lime and cement.....	25,000.00	
Paint shop for construction and repair.....	30,000.00	
Boiler shop for steam engineering.....	100,000.00	
Blacksmith shop for steam engineering.....	42,000.00	
Foundry for steam engineering.....	90,000.00	
Pattern shop for steam engineering.....	56,000.00	
Coppersmith shop for steam engineering.....	44,000.00	
		\$2,270,500.00
PUGET SOUND, WASH., NAVY-YARD.		
Proposed dry dock, next east boundary of yard.....	500,000.00	
Dredging of entrance to proposed dry dock.....	110,000.00	
Proposed wharf, west of and near east boundary of yard.....	50,000.00	
Proposed second wharf, west of east boundary of yard.....	35,000.00	
Dredging on west side of proposed second wharf, west of east boundary of yard.....	12,000.00	
Dredging on east side of proposed wharf No. 4, east of and next dry dock entrance.....	12,000.00	
Proposed pile wharf, west of wharf No. 3.....	50,000.00	
Dredging on both sides of proposed pile wharf, west of wharf No. 3.....	25,000.00	
Extension of dry dock boiler plant.....	40,000.00	
Land purchase.....	35,000.00	
Extension of quay wall.....	60,000.00	
Yards and docks machine shop.....	16,000.00	
Yards and docks paint shop and lumber shed, two-story, wood and iron.....	25,000.00	
Extension of general office building.....	16,000.00	
Chapel.....	10,000.00	
Chaplain's quarters.....	6,000.00	
Officers' quarters.....	32,000.00	
Warrant officers' quarters.....	13,000.00	
Dock water-closets.....	10,000.00	
Marine barracks.....	20,000.00	
Marine officers' quarters.....	15,000.00	
Extension of joiner shop, construction and repair.....	15,000.00	
Three-story office building, 60 by 150 feet, construction and repair.....	70,000.00	
Sheet-metal workers' shop, 64 by 304 feet, two-story, construction and repair.....	100,000.00	
Office building, steam engineering, 60 by 90, two-story.....	10,000.00	
Addition to storehouse No. 103, or alternative.....	50,000.00	
General storehouse on wharf, 80 by 450 feet.....	65,000.00	
Extension of sick quarters.....	5,000.00	
Two buildings, two-story each, 70 by 150 feet, wood and steel frame, with iron covering, for ordnance department.....	40,000.00	
To continue grading.....	100,000.00	

No. 9.—*Detailed statement of estimates received from navy-yards and stations for works of improvement for the fiscal year ending June 30, 1904—Continued.*

Yards, stations, and objects.	Estimates.	Total.
PUGET SOUND, WASH., NAVY-YARD—continued.		
To continue stumping and clearing	\$10,000.00	
Road building in yard	15,000.00	
Draining and clearing swamp	10,000.00	
Yard railway extension	25,000.00	
Equipment for yard railway	5,000.00	
Extension of salt-water fire protection system	10,000.00	
Extension of fresh-water system	8,000.00	
Extension of sewer system	5,000.00	
Extension of steam-heating system	10,000.00	
"Gamewell" fire-alarm system	5,000.00	
Extension of electric-lighting service	5,000.00	
Extension of telephone service	3,000.00	
Traveling crane around dock	100,000.00	
Two small boats	150.00	
Pile driver	5,000.00	
Six timber floats	3,000.00	
Six gang bridges	600.00	
One garbage scow	1,500.00	
Two lighters	7,000.00	
Wood-working machinery for yards and docks carpenter and joiner shop ..	10,000.00	
Machinery for yards and docks machine shop	10,000.00	
		\$1,795,250.00
SAN JUAN, P. R.		
Purchase of private property	650,000.00	
Fireproof wharf	100,000.00	
Site for naval hospital	50,000.00	
Reconstructing building for quarters	15,000.00	
Reconstructing buildings for marine barracks	5,000.00	
Purchase of private property	75,000.00	
Bulkhead and two fireproof piers	300,000.00	
Extension of coaling facilities	100,000.00	
Ten sets of quarters	80,000.00	
Marine barracks and quarters	70,000.00	
Dredging and machinery	250,000.00	
Masonry, dry dock	1,000,000.00	
Dispensary	6,000.00	
Station, power house	120,000.00	
Shop for construction and repair	70,000.00	
Shop for steam engineering	70,000.00	
Shop for yards and docks	70,000.00	
Shop for equipment	70,000.00	
Shop for ordnance	70,000.00	
Two storehouses for supplies and accounts	150,000.00	
Buildings for naval hospital	50,000.00	
Fire station and apparatus	25,000.00	
Water system	10,000.00	
Paving, draining, and sewers	20,000.00	
Railroad, rolling stock, and teams	20,000.00	
Wall and gate	10,000.00	
Furniture for offices and quarters	10,000.00	
		3,466,000.00
TUTUILA, SAMOAN ISLANDS, NAVAL STATION.		
Railway marine	75,000.00	
Light-house, Aunuu Island	15,000.00	
Light-house, Steps Point	15,000.00	
Carpenter and blacksmith shop	2,500.00	
Tool house	1,000.00	
Operating room and ward, hospital	2,000.00	
Grading	20,000.00	
Sewerage system	5,000.00	
One 5-ton hand derrick on wharf, on wide gauge, inside-flanged car, with track for same	1,000.00	
New deck for wharf	4,000.00	
Paint shop	1,000.00	
Boat shed	1,000.00	
Ice plant	5,000.00	
Storehouse for provisions and clothing	5,000.00	
Two sets quarters for officers	15,000.00	
Increasing water supply	6,000.00	
Machine shops	16,500.00	
Fences	2,000.00	
Lens and post lanterns, oil, supplies, etc., for reserve	1,636.00	
Six buoys for marking shoals, passages, moorings, and accessories	3,730.00	
		197,366.00
WASHINGTON, D. C., NAVY-YARD.		
Building for power-plant extension	250,000.00	
Railway landing bridge at wharf No. 5	30,000.00	
New roof for ordnance foundry building 22-23	25,000.00	
Alterations and new roof, store No. 10	64,546.00	

BUREAU OF YARDS AND DOCKS.

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No. 9.—*Detailed statement of estimates received from navy-yards and stations for works of improvement for the fiscal year ending June 30, 1904—Continued.*

Yards, stations, and objects.	Estimated.	Total.
WASHINGTON, D. C., NAVY-YARD—continued.		
Steel timber shed	\$15,032.05	
Piled floor in storehouse for guns and mounts	27,240.00	
Raising roof of annex to building No. 46	2,000.00	
Yards and docks shop building	95,000.00	
Central telephone and fire station	8,300.00	
Quay wall in front of extension of yard	25,000.00	
North and west walls to inclose extension of yard	32,000.00	
Grading and paving, to extend	50,000.00	
Fire-protection system, to extend	10,000.00	
Underground conduit system, to extend	10,000.00	
Painting	5,000.00	
Drainage, to extend	5,000.00	
Fireproof storehouse for general storekeeper	225,000.00	
Fireproof model storage building for construction and repair	39,500.00	
Fireproof power house for construction and repair	27,500.00	
		\$946,118.05

No. 10.—*Detailed statement of estimates received from navy-yards and stations for "Repairs and preservation" for the fiscal year ending June 30, 1904.*

Objects.	Boston, Mass.	Cavite, P. I.	Guam, Ladrone Islands.	Hawaii, H. I.	Key West, Fla.
Yard buildings	\$30,000.00	\$20,000.00	\$4,000.00	\$1,500.00	\$6,500.00
Officers' quarters	10,000.00	1,500.00	200.00	300.00	600.00
Wharves, sea walls, piers, bridges, etc.	5,000.00	15,000.00	200.00	2,000.00	4,000.00
Roads, walks, gutters, sewers, and drains ..	20,000.00	7,000.00	2,050.00	400.00	1,000.00
Fences and walls	1,000.00	2,000.00	200.00	600.00	2,000.00
Cranes, derricks, sheers, and hoisting apparatus ashore	1,000.00	3,000.00	50.00		100.00
Scows, lighters, boats, floats, etc., hoist- ing apparatus ashore	1,000.00	10,000.00	800.00		200.00
Furnaces, forges, heating apparatus, etc.	3,000.00	500.00			
Tracks and track and platform scales	500.00	1,000.00			1,200.00
Waterworks and accessories	4,000.00	2,500.00	500.00		400.00
Dredging, scowling, grading, filling in, etc.	1,000.00	3,000.00	250.00		
Dry docks (body of dock)	1,000.00	6,000.00			
Dry docks (caisson)	1,000.00				
Dry docks (pumping plant)	2,000.00				
Dry docks (other accessories)	1,000.00	2,000.00			
Heating, lighting, and power plants and accessories	15,000.00	1,000.00	250.00		
Telephones, telegraph and tube systems, etc.	1,000.00	500.00	250.00		
Miscellaneous repairs	10,000.00	2,000.00	500.00	1,000.00	
Total	107,500.00	77,000.00	9,250.00	5,800.00	16,000.00

Objects.	League Island, Pa.	Mare Island, Cal.	New Lon- don, Conn.	New York, N. Y.	Norfolk, Va.
Yard buildings	\$15,000.00	\$15,000.00	\$500.00	\$78,000.00	\$12,000.00
Officers' quarters	12,500.00	2,000.00	250.00	11,000.00	5,000.00
Wharves, sea walls, piers, bridges, etc.	3,000.00	1,500.00	150.00	5,000.00	2,500.00
Roads, walks, gutters, sewers, and drains ..	2,000.00	2,000.00	100.00	8,000.00	1,000.00
Fences and walls	500.00	2,000.00	25.00	4,000.00	1,500.00
Cranes, derricks, sheers, and hoisting apparatus ashore	500.00	4,000.00		3,000.00	2,500.00
Scows, lighters, boats, floats, etc., hoist- ing apparatus ashore	500.00	3,000.00	1,000.00	3,000.00	1,000.00
Furnaces, forges, heating apparatus, etc.	1,500.00	2,000.00	25.00	6,000.00	1,500.00
Tracks and track and platform scales	2,000.00	2,000.00		10,000.00	1,500.00
Waterworks and accessories	2,500.00	3,000.00	150.00	5,000.00	4,000.00
Dredging, scowling, grading, filling in, etc.	1,000.00	1,000.00	100.00	5,000.00	
Dry docks (body of dock)	200.00	500.00		3,000.00	5,000.00
Dry docks (caisson)	200.00	1,500.00		3,000.00	2,000.00
Dry docks (pumping plant)	3,000.00	2,000.00		25,000.00	1,000.00
Dry docks (other accessories)	200.00	3,000.00		4,000.00	
Heating, lighting, and power plants and accessories	4,000.00	1,000.00		16,000.00	12,000.00
Telephones, telegraph and tube systems, etc.	2,500.00	2,000.00		3,000.00	1,500.00
Miscellaneous repairs	1,000.00	15,000.00	200.00	8,000.00	1,500.00
Total	52,100.00	62,500.00	2,500.00	200,000.00	55,500.00

REPORT OF THE SECRETARY OF THE NAVY.

No. 10.—*Detailed statement of estimates received from navy-yards and stations for "Repairs and preservation" for the fiscal year ending June 30, 1904—Continued.*

Objects.	Pensacola, Fla.	Port Royal, S. C.	Portsmouth, N. H.	Puget Sound, Wash.	San Juan, P. R.
Yard buildings.....	\$19,211.91	\$3,000.00	\$16,000.00	\$8,000.00	\$4,500.00
Officers' quarters.....	3,574.13	2,500.00	5,000.00	3,000.00	1,500.00
Wharves, sea walls, piers, bridges, etc....	5,517.55	1,000.00	3,000.00	5,000.00	600.00
Roads, walks, gutters, sewers, and drains.	2,326.00	3,000.00	5,000.00	3,000.00	600.00
Fences and walls.....	4,218.96	600.00	1,000.00	1,500.00	100.00
Cranes, derricks, sheers, and hoisting apparatus ashore.....	243.50	200.00	1,000.00	1,000.00	500.00
Scows, lighters, boats, floats, etc., hoist- ing apparatus ashore.....	650.00	500.00	4,000.00	1,000.00	500.00
Furnaces, forges, heating apparatus, etc..	530.22	200.00	2,500.00	2,500.00	.....
Tracks and track and platform scales.....	2,992.72	100.00	1,000.00	3,000.00	500.00
Waterworks and accessories.....	827.64	200.00	4,000.00	3,000.00	1,000.00
Dredging, scowling, grading, filling in, etc.	1,500.00	2,000.00	4,000.00	2,500.00	.....
Dry docks (body of dock).....	1,430.64	8,000.00	2,000.00	1,000.00	.....
Dry docks (caisson).....	.....	1,500.00	1,000.00	2,000.00	.....
Dry docks (pumping plant).....	250.00	200.00	1,000.00	5,000.00	.....
Dry docks (other accessories).....	1,060.00	600.00	1,000.00	2,000.00	.....
Heating, lighting, and power plants and accessories.....	1,722.00	600.00	10,000.00	5,000.00	300.00
Telephones, telegraph and tube systems, etc.....	977.00	100.00	2,000.00	3,000.00	300.00
Miscellaneous repairs.....	5,500.00	500.00	10,000.00	4,000.00	1,000.00
Total.....	52,532.27	24,800.00	73,500.00	55,500.00	11,400.00

Objects.	Tutuila, Samoa Islands.	New Orleans, La.	Washington, D. C.	Total.
Yard buildings.....	\$1,000.00	\$500.00	\$18,000.00	\$252,711.91
Officers' quarters.....	750.00	500.00	9,500.00	69,674.13
Wharves, sea walls, piers, bridges, etc....	1,500.00	1,000.00	1,500.00	57,467.55
Roads, walks, gutters, sewers, and drains.	500.00	500.00	5,000.00	63,476.00
Fences and walls.....	500.00	1,000.00	500.00	23,242.96
Cranes, derricks, sheers, and hoisting apparatus ashore.....	200.00	500.00	.....	17,793.50
Scows, lighters, boats, floats, etc., hoist- ing apparatus ashore.....	200.00	500.00	150.00	28,000.00
Furnaces, forges, heating apparatus, etc..	50.00	100.00	5,000.00	25,405.22
Tracks and track and platform scales.....	200.00	1,000.00	10,000.00	36,992.72
Waterworks and accessories.....	100.00	500.00	2,500.00	34,177.64
Dredging, scowling, grading, filling in, etc.	.....	2,000.00	500.00	23,850.00
Dry docks (body of dock).....	.....	2,000.00	.....	30,130.64
Dry docks (caisson).....	.....	.....	.....	12,200.00
Dry docks (pumping plant).....	.....	1,000.00	.....	40,450.00
Dry docks (other accessories).....	.....	2,000.00	.....	16,860.00
Heating, lighting, and power plants and accessories.....	.....	500.00	7,500.00	74,872.00
Telephones, telegraph and tube systems, etc.....	200.00	500.00	50.00	17,877.00
Miscellaneous repairs.....	500.00	3,000.00	1,500.00	65,200.00
Total.....	5,700.00	17,100.00	61,700.00	890,382.27

No. 11.—*Detailed statement of estimates received from yards and stations for "Maintenance" for the fiscal year ending June 30, 1904.*

Objects.	Boston, Mass.	Cavite, P. I.	Charles- ton, S. C.	Erie, Pa.	Guam, L. I.	Hawaii, H. I.	Key West, Fla.
Freight and transportation (persons and material)....	\$1,850.00	\$24,000.00	\$300.00	.....	\$2,100.00	\$50.00	\$100.00
Books, maps, models, and drawings.....	2,000.00	500.00	300.00	.....	150.00	150.00	100.00
Purchase and repair of fire engines, apparatus, and plants.....	500.00	5,000.00	.....	.....	200.00	.....	300.00
Attendance on fire engines, apparatus, and plants.....	100.00	2,500.00	.....	.....	.....	.....	.....
Purchase and repair of ma- chinery and tools.....	5,000.00	4,500.00	200.00	.....	1,000.00	750.00	100.00
Purchase and maintenance of oxen, horses, and driv- ing teams.....	5,000.00	1,600.00	1,500.00	.....	3,185.00	1,200.00	.....

No. 11.—Detailed statement of estimates received from yards and stations for "Maintenance" for the fiscal year ending June 30, 1904—Continued.

Objects.	Boston, Mass.	Cavite, P. I.	Charles- ton, S. C.	Erie, Pa.	Guam, L. I.	Hawaii, H. I.	Key West, Fla.
Carts, timber, wheels, and vehicles for use in the navy-yards	\$1,000.00	\$1,800.00	\$300.00	.....	\$800.00	\$500.00	.....
Postage on public matter, telegrams, telephone rental, etc.	300.00	500.00	300.00	.....	.....	100.00	\$100.00
Printing and stationery	1,000.00	1,000.00	300.00	.....	1,800.00	50.00	120.00
Furniture for Government houses and offices in navy-yards	3,000.00	1,600.00	4,000.00	.....	300.00	1,000.00	2,000.00
Heating, lighting, and power plants (coal and other fuel; candles, oil, gas, electricity, etc.)	12,000.00	11,000.00	.....	.....	6,648.00	200.00	1,000.00
Heating, lighting, and power plants (attendance on)	15,000.00	1,000.00	.....	.....	9,548.40	.....	.....
Cleaning and clearing up yard, and care of buildings.	10,000.00	10,000.00	600.00	.....	400.00	1,500.00	1,600.00
Water	12,000.00	1,500.00	3,000.00	.....	.....	75.00	80.00
Flags and awnings	500.00	200.00	500.00	.....	.....	100.00	.....
Advertising	100.00	200.00	.....	.....	.....	.....	.....
Pay of watchmen	8,500.00	2,800.00	2,500.00	.....	.....	1,460.00	4,000.00
Incidental labor and miscellaneous material	3,500.00	1,000.00	2,500.00	\$500.00	4,631.76	1,000.00	3,500.00
Pay of men on leave	7,500.00	.....	2,000.00	.....	.....	.....	.....
Total	88,850.00	70,700.00	18,300.00	500.00	30,763.16	8,135.00	13,000.00

Objects.	League Is- land, Pa.	Mare Is- land, Cal.	New London, Conn.	New York, N. Y.	Norfolk, Va.	Pensa- cola, Fla.	Port Royal, P. R.
Freight and transportation (persons and material)	\$1,500.00	\$4,000.00	\$60.00	\$500.00	\$300.00	\$75.00	\$100.00
Books, maps, models, and drawings	350.00	100.00	.....	400.00	100.00	341.80	200.00
Purchase and repair of fire engines, apparatus, and plants	1,000.00	1,000.00	25.00	400.00	1,500.00	3,383.30	1,200.00
Attendance on fire engines, apparatus, and plants	8,500.00	2,000.00	.....	800.00	1,500.00	1,839.60	600.00
Purchase and repair of machinery and tools	2,500.00	1,000.00	100.00	10,000.00	2,500.00	1,150.00	200.00
Purchase and maintenance of oxen, horses, and driving teams	9,000.00	10,000.00	1,500.00	30,000.00	3,000.00	2,797.40	1,200.00
Carts, timber, wheels, and vehicles for use in the navy-yards	3,000.00	2,000.00	200.00	4,000.00	4,000.00	588.85	200.00
Postage on public matter, telegrams, telephone rental, etc.	1,000.00	100.00	90.00	700.00	150.00	125.00	350.00
Printing and stationery	700.00	1,200.00	25.00	1,500.00	1,000.00	252.00	500.00
Furniture for Government houses and offices in navy-yards	3,000.00	4,000.00	250.00	1,200.00	1,000.00	894.50	500.00
Heating, lighting, and power plants (coal and other fuel; candles, oil, gas, electricity, etc.)	18,000.00	25,000.00	150.00	29,000.00	10,000.00	1,365.00	500.00
Heating, lighting, and power plants (attendance on)	9,000.00	6,000.00	75.00	20,000.00	8,000.00	3,214.08	5,000.00
Cleaning and clearing up yard, and care of buildings.	3,500.00	10,000.00	1,000.00	14,000.00	10,000.00	3,357.04	600.00
Water .....	.....	14,000.00	.....	25,000.00	6,000.00	153.00	3,000.00
Flags and awnings	200.00	100.00	50.00	2,000.00	200.00	376.40	350.00
Advertising .....	.....	.....	.....	500.00	.....	.....	.....
Pay of watchmen	4,380.00	2,200.00	2,200.00	10,000.00	10,000.00	8,344.80	2,500.00
Incidental labor and miscellaneous material	4,000.00	7,500.00	225.00	5,000.00	2,000.00	1,876.80	2,000.00
Pay of men on leave	1,800.00	16,000.00	250.00	15,000.00	.....	.....	1,000.00
Total	71,430.00	106,200.00	6,200.00	170,000.00	61,250.00	30,134.57	20,000.00

No. 11.—*Detailed statement of estimates received from yards and stations for "Maintenance, for the fiscal year ending June 30, 1904—Continued.*

Objects.	Ports- mouth, N. H.	Puget Sound, Wash.	San Juan, P. R.	Tutulla, S. I.	New Or- leans, La.	Wash- ington, D. C.	Total.
Freight and transportation (persons and material).....	\$25.00	\$150.00	\$100.00	.....	\$1,000.00	\$50.00	\$36,260.00
Books, maps, models, and drawings.....	500.00	150.00	800.00	\$300.00	2,000.00	50.00	8,491.80
Purchase and repair of fire engines, apparatus, and plants.....	1,000.00	8,000.00	250.00	100.00	8,000.00	800.00	32,658.30
Attendance on fire engines, apparatus, and plants.....	2,500.00	1,000.00	.....	.....	1,500.00	750.00	23,589.60
Purchase and repair of machinery and tools.....	4,000.00	8,000.00	1,500.00	1,000.00	5,000.00	6,000.00	49,500.00
Purchase and maintenance of oxen, horses, and driving teams.....	8,000.00	1,500.00	1,000.00	1,000.00	2,000.00	6,000.00	89,482.40
Carts, timber, wheels, and vehicles for use in the navy-yards.....	2,000.00	8,000.00	500.00	1,500.00	2,000.00	4,000.00	31,388.85
Postage on public matter, telegrams, telephone rental, etc.....	200.00	200.00	50.00	100.00	300.00	300.00	4,965.00
Printing and stationery.....	500.00	1,000.00	300.00	300.00	400.00	350.00	12,297.00
Furniture for Government houses and offices in navy-yards.....	3,000.00	10,000.00	1,000.00	1,500.00	15,000.00	3,500.00	56,744.50
Heating, lighting, and power plants (coal and other fuel; candles, oil, gas, electricity, etc.).....	20,000.00	15,000.00	1,800.00	300.00	5,000.00	5,000.00	161,963.00
Heating, lighting, and power plants (attendance on).....	12,000.00	12,000.00	1,000.00	.....	5,000.00	3,500.00	110,337.48
Cleaning and clearing up yard, and care of buildings.....	6,000.00	7,000.00	3,000.00	1,500.00	5,000.00	8,500.00	97,557.04
Water.....	3,500.00	1,000.00	2,500.00	.....	1,000.00	.....	72,808.00
Flags and awnings.....	100.00	200.00	200.00	50.00	500.00	250.00	5,876.40
Advertising.....	50.00	300.00	.....	.....	200.00	.....	1,350.00
Pay of watchmen.....	5,000.00	3,000.00	.....	500.00	3,000.00	.....	70,384.80
Incidental labor and miscellaneous material.....	4,000.00	10,000.00	3,000.00	1,000.00	5,000.00	1,000.00	63,233.56
Pay of men on leave.....	5,000.00	.....	.....	.....	.....	3,000.00	61,450.00
Total.....	77,375.00	76,500.00	17,000.00	9,150.00	61,900.00	43,050.00	980,437.73

No. 12.—*Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904.*

Objects.	Estimates.	Total.
BOSTON, MASS., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk.....	\$1,400.00	
1 writer.....	1,017.25	
1 foreman laborer, at \$4 per diem.....	1,252.00	
1 messenger to commandant, at \$2 per diem.....	626.00	
1 messenger, at \$2 per diem.....	626.00	
1 mail messenger, at \$2 per diem, including Sundays.....	730.00	
1 draftsman, at \$5 per diem.....	1,565.00	
1 electrician.....	1,400.00	
1 master of tugs.....	1,200.00	
Submitted:		\$9,816.25
1 master of tugs (increase).....	300.00	
1 rodman inspector, at \$3.04 per diem.....	951.52	
1 writer, at \$3.04 per diem.....	951.52	
1 quartermen joiner, at \$3.84 per diem.....	1,201.92	
1 quartermen mason, at \$4.56 per diem.....	1,427.28	
Total.....		4,832.24
Total.....		14,648.49
CAVITE, P. I., NAVAL STATION.		
Appropriated for (act of Mar. 3, 1901):		
1 clerk.....	1,200.00	
1 time clerk.....	375.00	
1 writer.....	255.00	
1 messenger.....	185.00	
Do.....	150.00	
Total.....		2,165.00

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No. 12.—Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904—Continued.

Objects.	Estimates.	Total.
CAVITE, P. I., NAVAL STATION—continued.		
Submitted:		
1 clerk (American), commandant's office	\$1,600.00	
1 writer (Filipino), commandant's office, \$2 per diem	626.00	
1 clerk, second, commandant's office	1,260.00	
1 clerk, chief (American), yards and docks office	200.00	
1 interpreter (Filipino), commandant's office, \$1.50 per diem	469.50	
1 writer (American), yards and docks, \$3.25 per diem	1,017.25	
1 writer (Filipino), yards and docks, \$2 per diem	371.00	
2 timekeepers (Filipino), yards and docks office, \$1.50 per diem	564.00	
1 draftsman (American), yards and docks	1,800.00	
2 draftsmen (Filipino), yards and docks, \$2 per diem	1,252.00	
1 messenger (Filipino), commandant's office, \$1 per diem	128.00	
1 messenger (Filipino), yards and docks, \$1 per diem	163.00	
		\$9,450.75
Total.....		11,615.75
CHARLESTON, S. C., NAVY-YARD.		
Submitted:		
1 clerk, at \$4 per diem	1,464.00	
1 draftsman in charge, at \$5.60 per diem	2,049.60	
1 architectural draftsman, at \$5.04 per diem	1,844.68	
1 rodman and inspector, at \$3.04 per diem	1,112.64	
1 writer, at \$2.56 per diem	936.96	
1 special laborer, at \$2.56 per diem	936.96	
1 telephone operator, at \$2.64 per diem	966.24	
1 mail messenger, at \$2 per diem	732.00	
1 messenger and janitor, at \$1.52 per diem	556.32	
1 master of tugs, at \$4 per diem	1,464.00	
1 quartermen laborer in charge, at \$3.52 per diem	1,288.32	
		13,351.72
HAWAII NAVAL STATION, HONOLULU, H. I.		
Appropriated for (act of July 1, 1902):		
1 writer, at \$3.25 per diem	1,017.25	
1 messenger, at \$2 per day, including Sundays	730.00	
		1,747.25
Submitted:		
1 writer to commandant, increase	182.75	
1 clerk to civil engineer	1,500.00	
1 draftsman, civil engineer's office	1,878.00	
1 leveler, civil engineer's office	1,565.00	
1 rodman, civil engineer's office	1,408.50	
Do	1,095.50	
1 stenographer, civil engineer's office	1,252.00	
1 messenger, civil engineer's office	730.00	
		9,611.75
Total.....		11,359.00
KEY WEST, FLA., NAVAL STATION.		
Appropriated for (act July 1, 1902):		
1 mail messenger		600.00
Submitted:		
1 clerk, yards and docks office		1,200.00
Total.....		1,800.00
LEAGUE ISLAND, PA., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk, civil engineer's office	1,400.00	
1 draftsman, \$5 per diem	1,565.00	
1 master of tugs	1,200.00	
1 electrician	1,200.00	
1 writer and telegraph operator	1,000.00	
1 master of tugs	1,000.00	
1 mail messenger, at \$2 per diem, including Sundays	730.00	
1 messenger (commandant's office), at \$2 per diem	626.00	
		8,711.00
Submitted:		
1 draftsman in charge, at \$6 per diem	1,878.00	
1 foreman of laborers, at \$4 per diem	1,252.00	
1 foreman of joiners, at \$4 per diem	1,252.00	
1 stenographer and typewriter, civil engineer's office	1,000.00	
1 messenger (commandant's office), 24 cents per day increase	75.12	
1 draftsman, architectural	135.00	
1 master of tugs	200.00	
		5,792.12
Total.....		14,513.12

No. 12.—*Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904—Continued.*

Objects.	Estimates.	Total.
MARE ISLAND, CAL., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk	\$1,400.00	
1 writer	1,017.25	
1 foreman mason, \$6 per diem	1,878.00	
1 foreman laborer, \$5.50 per diem	1,721.50	
1 pilot	1,500.00	
1 draftsman, \$5 per diem	1,565.00	
1 mail messenger, \$2 per diem, including Sundays	730.00	
1 messenger, \$2 per diem	626.00	
1 electrician, increase	1,400.00	
1 quartermen joiner, \$4.56 per diem	1,427.28	
1 telegraph operator, \$3.28 per diem	1,026.64	
		\$14,291.67
Submitted:		
1 quartermen joiner, 44 cents per diem increase	137.72	
1 foreman machinist, \$5 per diem	1,565.00	
1 special laborer and requisition clerk	1,000.00	
		2,702.72
Total		16,994.39
NEW LONDON, CONN., NAVAL STATION.		
Submitted:		
1 clerk to officer in charge		1,400.00
NEW ORLEANS, LA., NAVAL STATION.		
Submitted:		
1 clerk	1,200.00	
1 writer	900.00	
1 master of tugs	1,500.00	
1 foreman laborer	1,200.00	
1 draftsman	1,500.00	
1 quartermen	900.00	
1 stenographer and typewriter	1,000.00	
1 rodman and inspector	900.00	
1 messenger	500.00	
		9,600.00
NEW YORK, N. Y., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk	1,400.00	
1 writer	1,017.25	
1 yard pilot	2,000.00	
2 masters of tugs, \$1,500 each	3,000.00	
2 writers, \$900 each	1,800.00	
1 foreman laborer, \$4.50 per diem	1,408.50	
1 mail messenger, \$2 per diem, including Sundays	730.00	
2 messengers, \$2.25 per diem each	1,408.50	
1 draftsman, \$5 per diem	1,565.00	
1 quartermen, \$3 per diem	939.00	
1 superintendent of teams, or quartermen, \$4 per diem	1,252.00	
1 messenger to commandant, \$2.25 per diem, including Sundays	821.25	
1 messenger, yards and docks, \$2.25 per diem	704.25	
1 stenographer and typewriter, \$3.26 per diem	1,020.38	
1 electrician	1,400.00	
1 bookkeeper or accountant	1,200.00	
		21,666.13
Submitted:		
1 clerk, increase	200.00	
1 master of tugs	1,500.00	
1 writer, at \$900 per annum	900.00	
1 superintendent of teams, or quartermen, 52 Sundays at \$4 each, increase	208.00	
1 electrician, increase	200.00	
1 messenger, \$2.25 per diem	704.25	
1 special laborer, typewriting, etc., \$3.04 per diem	951.52	
1 master joiner, \$5.04 per diem	1,577.52	
1 master mason, \$5.04 per diem	1,577.52	
1 master machinist, \$5.04 per diem	1,577.52	
1 master wharf builder, \$5.04 per diem	1,577.52	
1 stenographer and typewriter, at \$3.28 per diem	1,026.64	
1 copyist, at \$3.04 per diem	951.52	
		12,952.01
Total		34,618.14

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No. 12.—Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904—Continued.

Objects.	Estimates.	Total.
NORFOLK, VA., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 chief clerk, civil engineer's office.....	\$1,400.00	
1 writer, office captain of yard.....	1,017.25	
1 writer, civil engineer's office.....	1,000.00	
1 foreman laborer, \$4 per diem.....	1,252.00	
1 electrician.....	1,200.00	
1 mail messenger, \$2 per diem, including Sundays.....	730.00	
2 messengers, \$2 per diem each.....	1,252.00	
1 yard pilot.....	707.38	
1 master of tugs, civil engineer's office.....	1,200.00	
1 draftsman.....	1,500.00	
1 bookkeeper.....	1,200.00	
		\$12,458.63
Submitted:		
1 chief clerk, increase.....	200.00	
1 electrician, increase.....	400.00	
1 yard pilot, increase.....	68.86	
1 stenographer, civil engineer's office.....	1,200.00	
1 foreman mechanic, \$4 per diem.....	1,408.50	
1 messenger, civil engineer's office.....	720.00	
1 master of tugs, office captain of yard.....	1,800.00	
		5,797.86
Total.....		18,255.99
PENSACOLA, FLA., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk.....	1,200.00	
1 mail messenger, \$2 per diem, including Sundays.....	730.00	
		1,930.00
Submitted:		
1 special laborer, commandant's office.....	879.20	
1 messenger for yards and docks office, \$1.04 per diem.....	326.56	
1 clerk, yards and docks, increase.....	200.00	
1 mail messenger, increase.....	2.00	
		1,407.76
Total.....		3,337.76
PORT ROYAL, S. C., NAVAL STATION.		
Appropriated for (act July 1, 1902):		
1 clerk.....	1,200.00	
1 rodman and inspector, \$3 per diem.....	939.00	
1 messenger and janitor, \$1.50 per diem, including Sundays.....	547.50	
1 master of tugs.....	1,200.00	
1 mail messenger, \$2 per diem, including Sundays.....	730.00	
1 telegraph operator, \$2 per diem, including Sundays.....	730.00	
1 electrician.....	1,200.00	
		6,546.50
Submitted:		
1 messenger and janitor, 50 cents per diem (increase), including Sundays.....	182.50	
1 draftsman, \$5 per diem.....	1,565.00	
1 foreman laborer, \$4 per diem.....	1,252.00	
1 quartermaster laborer, \$3.52 per diem.....	1,101.76	
1 messenger to commandant, \$1.50 per diem.....	469.50	
1 writer to captain of yard, \$3 per diem, including Sundays.....	1,095.00	
1 special laborer, messenger, yards and docks office, \$1.76 per diem.....	550.88	
1 clerk, increase.....	200.00	
1 telegraph operator, increase.....	204.40	
		6,621.04
Total.....		13,167.54
PORTSMOUTH, N. H., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk.....	1,400.00	
1 mail messenger, at \$2 per diem (including Sundays).....	730.00	
1 messenger.....	600.00	
1 foreman laborer and head teamster, at \$4 per diem (including Sundays).....	1,460.00	
1 janitor.....	600.00	
1 pilot, at \$3 per day (including Sundays).....	1,095.00	
1 draftsman, at \$4 per diem.....	1,252.00	
1 electrician.....	1,200.00	
		8,337.00

No. 12.—*Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904—Continued.*

Objects.	Estimates.	Total.
PORTSMOUTH, N. H., NAVY-YARD—continued.		
Submitted:		
1 stenographer and typewriter	\$1,000.00	
1 writer	900.00	
1 leadingman laborer, at \$2.24 per diem	701.12	
1 draftsman	1,200.00	
1 leveler and inspector	1,200.00	
1 quarterman mason, at \$4.24 per diem	1,327.12	
1 engine tender, in charge of fire engine and heating plant	1,460.00	
1 captain of watch, at \$2.80 per day (including Sundays)	1,022.00	
4 watchmen, at \$2 per diem (including Sundays)	2,920.00	
1 electrician, increase	400.00	
		\$12,130.24
Total		20,467.24
PUGET SOUND, WASHINGTON, NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk	1,200.00	
1 draftsman, \$5 per diem	1,565.00	
1 messenger and janitor, \$1.76 per diem (including Sundays)	642.40	
1 master of tugs	1,200.00	
1 copyist	900.00	
1 electrician	1,200.00	
		6,707.40
Submitted:		
1 clerk (increase)	200.00	
1 draftsman (increase)	319.00	
1 messenger and janitor (increase), 24 cents per diem (including Sundays)	89.60	
1 master of tugs (increase)	200.00	
2 writers	1,800.00	
1 draftsman	1,570.00	
1 writer and telegraph operator, office commandant	900.00	
1 electrician (increase)	200.00	
1 writer, office captain of yard	900.00	
		6,178.60
Total		12,886.00
SACKETTS HARBOR, N. Y., NAVAL STATION.		
Appropriated for (act July 1, 1902):		
1 ship keeper		365.00
SAN JUAN, P. R., NAVAL STATION.		
Appropriated for (act Mar. 3, 1901):		
1 clerk	1,200.00	
1 writer, commandant's office	960.00	
1 mail messenger	420.00	
		2,580.00
Submitted:		
1 stenographer, writer, and time clerk, office of civil engineer	1,200.00	
1 machinist electrician	1,080.00	
1 machinist, distilling plant	720.00	
1 transitman, office civil engineer	1,200.00	
1 draftsman, office civil engineer	1,200.00	
Do	960.00	
Do	840.00	
1 tracer, office civil engineer	600.00	
1 rodman	600.00	
1 foreman	960.00	
1 quarterman mason	720.00	
1 quarterman carpenter	720.00	
1 quarterman machinist	720.00	
		11,520.00
Total		14,100.00
TUTUILA NAVAL STATION AND ISLAND.		
Submitted:		
1 interpreter	2,500.00	
1 clerk (stenographer) to commandant	1,500.00	
		4,000.00

BUREAU OF YARDS AND DOCKS.

No. 12.—Detailed statement of estimates received from navy-yards and stations for "Civil establishment, yards and docks," for the fiscal year ending June 30, 1904—Continued.

Objects.	Estimates.	Total.
WASHINGTON, D. C., NAVY-YARD.		
Appropriated for (act July 1, 1902):		
1 clerk to head of department.....	\$1,400.00	
1 messenger.....	626.00	
1 foreman.....	1,252.00	
1 electrician.....	1,400.00	
1 writer.....	1,017.25	
		\$5,695.25
Submitted:		
1 clerk to head of department (increase)	200.00	
1 foreman (increase)	150.24	
1 writer (increase).....	182.75	
1 writer and stenographer.....	900.00	
		1,432.99
Total.....		7,128.24

No. 13.—Statement of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904.

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.
Salaries, Bureau of Yards and Docks:			
1 chief clerk.....	\$2,000.00		
1 draftsman and clerk.....	1,800.00		
1 clerk of class 3.....	1,600.00		
2 clerks of class 2.....	2,800.00		
1 clerk of class 1.....	1,200.00		
1 assistant messenger.....	720.00		
1 laborer.....	660.00		
		\$10,780.00	\$10,780.00
NOTE.—Statement in detail showing the number of persons employed Sept. 1, 1902, in the Bureau of Yards and Docks, under appropriation for "Public works," submitted in accordance with the act of Apr. 17, 1900:			
1 electrical expert aid, at \$5.52 per diem, \$1,727.76 per annum.			
1 mechanical expert aid, at \$5.52 per diem, \$1,727.76 per annum.			
7 draftsmen, at \$5.04 per diem, \$1,577.52 per annum; \$11,042.64 total.			
2 draftsmen, at \$4.48 per diem, \$1,402.24 per annum; \$2,804.48 total.			
2 draftsmen, at \$4 per diem, \$1,252 per annum; \$2,504 total.			
1 draftsman, at \$3.76 per diem, \$1,176.88 per annum.			
1 draftsman, at \$3.52 per diem, \$1,101.76 per annum.			
2 special laborers, at \$3.04 per diem, \$951.52 per annum; \$1,905.04 total.			
3 special laborers, at \$2.80 per diem, \$876.40 per annum; \$2,629.20 total.			
1 minor draftsman, at \$2 per diem, \$626 per annum.			
1 special laborer, at \$1.52 per diem, \$475.76 per annum.			
Total, \$27,721.28.			
The Bureau further reports, in accordance with the seventh section of the act approved Mar. 2, 1895 (Stat. L. 28, p. 764), that—			
1 clerk, at \$1,000 per annum, was employed in the Bureau and carried on the rolls of the Secretary's office during the fiscal year 1901-2.			
1 messenger boy, at \$420 per annum, was employed in the Bureau and carried on the rolls of the Bureau of Supplies and Accounts during the fiscal year.			
1 laborer, at \$660 per annum, was employed in the Bureau and carried on the rolls of the Bureau of Construction and Repair during the fiscal year.			
1 clerk of class 2, at \$1,400 per annum, was employed in the Secretary's office and carried on the rolls of the Bureau from July 1, 1901, to Apr. 14, 1902.			
1 assistant messenger, at \$720 per annum, was employed in the Bureau of Construction and Repair and carried on the rolls of the Bureau during the fiscal year.			
The Bureau further reports, under the provisions of section 2, act of July 11, 1890 (26 Stat. L., p. 267), that all the employees of the Bureau are above a fair standard of efficiency.			

No. 13.—*Statement of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904—Continued.*

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.
MAINTENANCE, YARDS AND DOCKS.			
For general maintenance of yards and docks, namely: For freight, transportation of material and stores; books, maps, models, and drawings; purchase and repair of fire engines; fire apparatus and plants; machinery; purchase and maintenance of oxen, horses, and driving teams; carts, timber wheels, and all vehicles for use in navy-yards; tools and repairs of the same; postage on letters and other mailable matter on public service sent to foreign countries, and telegrams; stationery; furniture for Government houses and offices in navy-yards; coal and other fuel; candles, oil, and gas; attendance on light and power plants; cleaning and clearing up yards and care of buildings; attendances on fires, lights, fire engines, and fire apparatus and plants; incidental labor at navy-yards; water tax, tolls, and ferriage; pay of watchmen in navy-yards; awnings and packing boxes, and advertising for yards and docks and other purposes; and for rent of wharf and storehouse at Erie, Pa., for use and accommodation of U. S. S. Michigan, and for pay of employees on leave (\$1,000,000 submitted) (act July 1, 1902)	\$700,000.00	\$700,000.00	\$600,000.00
CONTINGENT, YARDS AND DOCKS.			
For contingent expenses that may arise at navy-yards and stations (act July 1, 1902)	50,000.00	50,000.00	40,000.00
CIVIL ESTABLISHMENT, YARDS AND DOCKS.			
Navy-yard, Boston, Mass.: Appropriated for (act July 1, 1902)—			
1 clerk	1,400.00		
1 foreman laborer, at \$4 per diem	1,256.00		
1 messenger to commandant, at \$2 per diem	628.00		
1 messenger, at \$2 per diem	628.00		
1 mail messenger, at \$2 per diem, including Sundays	732.00		
1 writer	1,017.25		
1 draftsman, at \$5 per diem	1,570.00		
1 master of tugs	1,200.00		
1 electrician	1,400.00		
		9,831.25	9,816.25
Naval station, Cavite, P. I.: Appropriated for (act July 1, 1902)—			
1 clerk	1,200.00		
1 time clerk	480.00		
1 writer	360.00		
1 messenger	240.00		
1 messenger	180.00		
		2,460.00	2,460.00
Naval station, Hawaii: Appropriated for (act July 1, 1902)—			
1 writer	1,017.25		
1 messenger, at \$2 per diem, including Sundays ..	732.00		
		1,749.25	1,747.25
Naval station, Key West, Fla.: Appropriated for (act July 1, 1902)—			
1 mail messenger	600.00	600.00	600.00
Navy-yard, League Island, Pa.: Appropriated for (act July 1, 1902)—			
1 clerk	1,400.00		
1 writer and telegraph operator	1,000.00		
1 messenger, at \$2 per diem	628.00		
1 foreman laborer, at \$4 per diem	1,256.00		
1 master of tugs	1,200.00		
1 draftsman, at \$5 per diem	1,570.00		
1 electrician	1,200.00		
1 mail messenger, at \$2 per diem, including Sundays	732.00		
1 master of tugs	1,000.00		
		9,986.00	9,973.00
Navy-yard, Mare Island, Cal.: Appropriated for (act July 1, 1902)—			
1 clerk	1,400.00		
1 writer	1,017.25		
1 foreman mason, at \$6 per diem	1,884.00		
1 foreman laborer, at \$5.50 per diem	1,727.00		
1 pilot	1,500.00		
1 draftsman, at \$5 per diem	1,570.00		

BUREAU OF YARDS AND DOCKS.

No. 13.—*Statement of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904—Continued.*

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.		
CIVIL ESTABLISHMENT, YARDS AND DOCKS—continued.					
Navy-yard, Mare Island, Cal.—Continued.					
Appropriated for (act July 1, 1902)—Continued.					
1 mail messenger, at \$2 per diem, including Sundays	\$732.00	\$14,320.01	\$14,291.67		
1 messenger, at \$2 per diem	628.00				
1 electrician	1,400.00				
1 quartermaster joiner, at \$4.56 per diem	1,431.84				
1 telegraph operator, at \$3.28 per diem	1,029.92				
Naval station, New Orleans, La.:					
Appropriated for (act July 1, 1902)—					
1 clerk	1,200.00	2,691.00	2,686.50		
1 rodman and inspector, at \$3 per diem	942.00				
1 messenger and janitor, at \$1.50 per diem	549.00				
Navy-yard, New York, N. Y.:					
Appropriated for (act July 1, 1902)—					
1 clerk	1,400.00	21,696.89	21,666.13		
1 writer	1,017.25				
1 yard pilot	2,000.00				
2 masters of tugs	3,000.00				
2 writers	1,800.00				
1 foreman laborer, at \$4.50 per diem	1,413.00				
1 mail messenger, at \$2 per diem, including Sundays	732.00				
2 messengers, at \$2.25 per diem each	1,413.00				
1 draftsman, at \$5 per diem	1,570.00				
1 quartermaster, at \$3 per diem	942.00				
1 superintendent of teams or quartermaster, at \$4 per diem	1,256.00				
1 messenger to commandant, at \$2.25 per diem, including Sundays	823.50				
1 messenger, yards and docks, at \$2.25 per diem	706.50				
1 stenographer and typewriter, at \$3.26 per diem	1,023.64				
1 electrician	1,400.00				
1 bookkeeper or accountant	1,200.00				
Navy-yard, Norfolk, Va.:					
Appropriated for (act July 1, 1902)—					
1 clerk	1,400.00	12,470.89	12,458.63		
1 writer	1,017.25				
1 writer	1,000.00				
1 foreman laborer, at \$4 per diem	1,256.00				
1 electrician	1,200.00				
1 mail messenger, at \$2 per diem, including Sundays	732.00				
2 messengers, at \$2 per diem each	1,256.00				
1 pilot, at \$2.26 per diem	709.64				
1 master of tugs	1,200.00				
1 draftsman	1,500.00				
1 bookkeeper	1,200.00				
Navy-yard, Pensacola, Fla.:					
Appropriated for (act July 1, 1902)—					
1 clerk	1,200.00	1,932.00	1,930.00		
1 mail messenger, at \$2 per diem, including Sundays	732.00				
Naval station, Port Royal, S. C.:					
Appropriated for (act July 1, 1902)—					
1 clerk	1,200.00	6,555.00	6,546.50		
1 rodman and inspector, at \$3 per diem	942.00				
1 messenger and janitor, at \$1.50 per diem, including Sundays	549.00				
1 master of tugs	1,200.00				
1 mail messenger, at \$2 per diem, including Sundays	732.00				
1 telegraph operator, at \$2 per diem, including Sundays	732.00				
1 electrician	1,200.00				
Navy-yard, Portsmouth, N. H.:					
Appropriated for (act July 1, 1902)—					
1 clerk	1,400.00				
1 mail messenger at \$2 per diem, including Sundays	732.00				
1 messenger	600.00				
1 foreman-laborer and head teamster at \$4 per diem, including Sundays	1,164.00				

No. 13.—*Statements of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904—Continued.*

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.
CIVIL ESTABLISHMENTS, YARDS AND DOCKS—continued.			
Navy-yard, Portsmouth, N. H.—Continued.			
Appropriated for (act July 1, 1902)—Continued.			
1 janitor.....	\$600.00		
1 pilot at \$3 per diem, including Sundays.....	1,098.00		
1 draftsman at \$4 per diem.....	1,256.00		
1 electrician.....	1,200.00		
		\$8,350.00	\$8,387.00
Navy-yard, Puget Sound, Wash.:			
Appropriated for (act July 1, 1902)—			
1 clerk.....	1,200.00		
1 draftsman at \$5 per diem.....	1,570.00		
1 messenger and janitor at \$1.76 per diem, including Sundays.....	644.16		
1 master of tugs.....	1,200.00		
1 copyist.....	900.00		
1 electrician.....	1,200.00		
1 writer and telegraph operator.....	900.00		
		7,614.16	7,607.40
Naval station, Sacketts Harbor, N. Y.:			
Appropriated for (act July 1, 1902)—			
1 ship keeper.....	366.00	366.00	366.00
Naval station, San Juan, P. R.:			
Appropriated for (act July 1, 1902)—			
1 clerk.....	1,200.00		
1 writer, commandant's office.....	960.00		
1 mail messenger.....	420.00		
		2,580.00	2,580.00
Navy-yard, Washington, D. C.:			
Appropriated for (act July 1, 1902)—			
1 clerk.....	1,400.00		
1 messenger at \$2 per diem.....	628.00		
1 foreman-laborer at \$4 per diem.....	1,256.00		
1 electrician.....	1,400.00		
1 writer.....	1,017.25		
		5,701.25	5,695.25
In all, civil establishment, Bureau of Yards and Docks.....		108,903.70	108,760.58
PUBLIC WORKS, NAVY-YARDS AND STATIONS.			
Navy-yard, Boston, Mass.:			
Sewer system, extensions.....	15,000.00		
Electric-light plant, extensions.....	15,000.00		
Water-closets, additional.....	5,000.00		
Paving, to continue.....	50,000.00		
Drains.....	5,000.00		
Railroad system, extensions.....	24,000.00		
Pile driver.....	6,500.00		
Tools for yards and docks.....	10,000.00		
Paint shop for construction and repair.....	35,000.00		
Steel shears, improvements to.....	15,000.00		
Refitting and improving buildings Nos. 42 and 43.....	40,000.00		
Central heating system, extensions.....	20,000.00		
Extension of building No. 107.....	50,000.00		
Extension of building No. 39.....	205,000.00		
		495,500.00	702,700.00
Naval station, Cavite, P. I.:			
Floating steel dry dock (to cost \$1,225,000).....	300,000.00		
Distilling plant.....	20,000.00		
		320,000.00	233,500.00
Navy-yard, Charleston, S. C.:			
Workshop (to cost \$80,000).....	30,000.00		
Equipment building (to cost \$125,000).....	62,500.00		
Machine shop for steam engineering (to cost \$174,000).....	94,000.00		
Foundry and copper shop (to cost \$118,000).....	58,000.00		
Power house (to cost \$50,000).....	25,000.00		
Workshop for ordnance.....	60,000.00		
Shipfitters' shop, with mold loft and furnace shed, for construction and repair (to cost \$200,000).....	100,000.00		
Power house and fuel storage for construction and repair (to cost \$80,000).....	45,000.00		
Machine shop for construction and repair (to cost \$120,000).....	80,000.00		
Joiner shop for construction and repair (to cost \$120,000).....	90,000.00		
Foundry for construction and repair (to cost \$75,000).....	55,000.00		
		699,500.00	913,300.00

BUREAU OF YARDS AND DOCKS.

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No. 13.—Statement of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904—Continued.

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.
PUBLIC WORKS, NAVY-YARDS AND STATIONS—continued.			
Naval station, Island of Guam:			
General storehouse.....	\$10,000.00	\$10,000.00	
Naval station, Key West, Fla.:			
Quay wall, to continue.....	50,000.00		
Marine railway.....	15,000.00		
Coaling plant, extensions and improvements.....	100,000.00	165,000.00	\$118,950.00
Navy-yard, League Island, Pa.:			
To continue retaining wall about reserve basin.....	50,000.00		
Grading and paving, to continue	30,000.00		
Sewer system, extensions	10,000.00		
Electric plant, extensions	75,000.00		
Railroad system, extensions	20,000.00		
Water system, extension	12,000.00		
Lumber yard and sheds	50,000.00		
Dredging and filling in Delaware water front, to continue	25,000.00		
Tools and appliances for yards and docks.....	5,000.00		
Pitch house and oakum loft for construction and repair	5,200.00		
Underground conduit system	12,000.00		
Fireproof vault, building No. 1.....	2,000.00		
House over artesian-well pumps	3,000.00		
Fire protection system, extensions.....	35,000.00		
Machine shop for steam engineering, to complete	25,000.00	359,200.00	522,300.00
Navy-yard, Mare Island, Cal.:			
Paving and grading, to continue	10,000.00		
Sewers and closets, additional	5,000.00		
Railroad system, extensions	10,000.00		
Electric plant, extension.....	50,000.00		
Medical dispensary, to complete.....	2,000.00		
Repairing 40-ton crane track.....	16,000.00		
Completing and extending timber storage.....	4,000.00		
Light and power station building.....	40,000.00		
Building for metal storage	25,000.00		
Moving and improving building No. 113.....	12,000.00		
Storage tanks for fuel oil.....	12,000.00		
Underground conduit system.....	25,000.00		
Fittings for chapel	1,000.00		
Locomotive crane.....	12,000.00		
Toilet rooms for naval prison	6,000.00		
Steam heating and improvements, building No. 45	6,000.00		
Extension of electrical workshop.....	25,000.00		
Extension of brass foundry	7,000.00		
Bridge between buildings Nos. 45 and 65.....	1,500.00		
Remodeling chain shed.....	4,000.00	273,500.00	225,500.00
Naval station, New London, Conn.:			
Railroad scales.....	2,500.00	2,500.00	41,000.00
Naval station, New Orleans, La.:			
Additions to floating dock	15,000.00		
Shops for steam engineering, extension.....	50,000.00		
Approach to floating dry dock	10,000.00		
Latrines.....	1,800.00	76,800.00	339,000.00
Navy-yard, New York, N. Y.:			
Paving and grading, to continue.....	20,000.00		
Dredging, to continue	25,000.00		
Coal storage and coal handling plant, extensions.....	25,000.00		
Railroad system, extensions	15,000.00		
Extending locomotive crane track.....	30,000.00		
Electric plant, extensions.....	30,000.00		
Storehouse for naval supply-fund stores, to complete.....	8,000.00		
Quay walls between dry docks 2 and 3.....	25,000.00		
Fireproofing building No. 33 for coffee-roasting plant.....	45,000.00		
Rebuilding wharves on cob dock	25,000.00		
New roof for building No. 28.....	20,000.00		
Piers, additional	100,000.00		
Ordnance building, to replace buildings 79, 80, and 83.....	100,000.00		
Repairing and rebuilding crane track around dry dock No. 1.....	16,000.00		
Coal bins and tracks for yards and docks	2,500.00		
Improvements to building No. 126.....	15,000.00	501,500.00	560,500.00

No. 13.—*Statement of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904—Continued.*

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.
PUBLIC WORKS, NAVY-YARDS AND STATIONS—continued.			
Navy-yard, Norfolk, Va.:			
Quay walls for fitting-out basin, to continue.....	\$75,000.00		
Railroad track, extensions.....	5,000.00		
Electric capstans for dry docks.....	5,000.00		
Cistern.....	20,000.00		
Machinery and tools for yards and docks, additional.	3,000.00		
Storehouse for supplies and accounts (to cost \$100,000).....	100,000.00		
Landing float and slip for railroad cars.....	40,000.00		
Remodeling building No. 39 for plumbers', tanners', and sheet-metal workers' shop.....	75,000.00		
Improvements to storehouse, building No. 15.....	15,000.00		
Coaling plant.....	160,000.00		
Enlarging canvas shed for storage of chain.....	30,000.00		
		\$528,000.00	\$344,000.00
Navy-yard, Pensacola, Fla.:			
Crib for floating dry dock.....	10,000.00		
Dredging, to continue.....	10,000.00		
Electric-light plant, additions.....	3,000.00		
Equipment building.....	120,000.00		
		143,000.00	2,500.00
Navy-yard, Portsmouth, N. H.:			
Quay wall, to extend.....	75,000.00		
Grading, to continue.....	25,000.00		
Railroad and rolling stock, additions.....	8,000.00		
Sewer system, extensions.....	4,000.00		
Water system, extensions.....	4,000.00		
Tools for yards and docks.....	2,000.00		
Locomotive crane and track.....	50,000.00		
Electric plant, extensions.....	15,000.00		
Central heating plant.....	15,000.00		
Steel-plant building for construction and repair (to cost \$150,000).....	50,000.00		
Removal of Hendersons Point (to cost \$749,000).....	549,000.00		
Blasting in front of quay wall.....	25,000.00		
Naval prison.....	95,000.00		
Coaling plant, extensions.....	30,000.00		
		947,000.00	872,575.00
Navy-yard, Puget Sound, Wash.:			
Sewers, extensions.....	5,000.00		
To continue grading.....	30,000.00		
Fire-protection system, extensions.....	10,000.00		
Electric-light plant, extensions.....	3,000.00		
Telephone system, extensions.....	1,000.00		
Railroad and equipment, extensions.....	10,000.00		
Boat shop for construction and repair (to cost \$150,000).....	50,000.00		
Water-closets.....	2,500.00		
Water system, extension.....	8,000.00		
Foundry and coppersmith shop (to cost \$100,000).....	50,000.00		
Boiler and blacksmith shop (to cost \$100,000).....	50,000.00		
Heating system, extensions.....	3,000.00		
Extension of dry-dock boiler plant.....	10,000.00		
Extension of general office building.....	5,000.00		
Two officers' quarters.....	15,000.00		
Sick quarters, to complete.....	4,200.00		
Locomotive crane and track about dry dock (to cost \$100,000).....	50,000.00		
Timber floats and gangway bridges.....	2,000.00		
Garbage scow.....	1,500.00		
		310,200.00	810,500.00
Naval station, Tutuila:			
Grading and filling.....	20,000.00		
Waterworks and accessories.....	5,000.00		
Carpenter and blacksmith shop.....	5,000.00		
Mooring, shoal, and channel buoys.....	4,000.00		
		34,000.00	93,000.00
Navy-yard, Washington, D. C.:			
Building for power plant, extension.....	125,000.00		
Railway landing bridge.....	30,000.00		
Tiled floor in storehouse for guns and mounts.....	27,240.00		
Raising roof of annex to building No. 46.....	2,000.00		
Grading and paving.....	25,000.00		
Fireproof storehouse for naval supplies.....	75,000.00		
Fireproof model storage building.....	39,500.00		
Coal storage and handling plant for new power plant.....	45,000.00		
Plans and specifications for public works.....		368,740.00	240,000.00
Repairs and preservation, navy-yards and stations.....	30,000.00	30,000.00	30,000.00
	550,000.00	550,000.00	550,000.00
Total, public works navy-yards and stations.....		5,814,440.00	7,649,325.00

BUREAU OF YARDS AND DOCKS.

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No. 13.—*Statement of estimates submitted by the Bureau for all purposes for the fiscal year ending June 30, 1904—Continued.*

Detailed objects of expenditure and explanations.	Estimates.	Total under each head.	Appropriated for 1902-3.
RECAPITULATION.			
Salaries, Bureau of Yards and Docks.....		\$10,780.00	\$10,780.00
Maintenance, yards and docks.....		700,000.00	600,000.00
Contingent, yards and docks.....		50,000.00	40,000.00
Civil establishment, yards and docks.....		108,903.70	108,760.58
Public works, navy-yards and stations.....		5,814,440.00	7,649,325.00
Navy-yard, Boston, Mass.....	\$495,500.00		
Naval station, Cavite, P. I.....	320,000.00		
Navy-yard, Charleston, S. C.....	699,500.00		
Naval station, Island of Guam.....	10,000.00		
Naval station, Key West, Fla.....	165,000.00		
Navy-yard, League Island, Pa.....	359,200.00		
Navy-yard, Mare Island, Cal.....	273,500.00		
Naval station, New London, Conn.....	2,500.00		
Naval station, New Orleans, La.....	76,800.00		
Navy-yard, New York, N. Y.....	501,500.00		
Navy-yard, Norfolk, Va.....	528,000.00		
Navy-yard, Pensacola, Fla.....	143,000.00		
Navy-yard, Portsmouth, N. H.....	947,000.00		
Navy-yard, Puget Sound, Wash.....	310,200.00		
Naval station, Tutuila.....	34,000.00		
Navy-yard, Washington, D. C.....	368,740.00		
Plans and specifications, public works.....	30,000.00		
Repairs and preservation, navy-yards and stations.....	550,000.00		
Total, public works.....		5,814,440.00	7,649,325.00
Total.....		6,684,123.70	8,408,865.58

No. 14.—*Statement showing the character, value, and condition of improvements under the*
BOSTON, MASS.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
A	Quarters.....	Mail messenger	Brick.....	Granite...	2	Slate on wood.
B	do	Equipment officer	do	Brick	2	do
C	do	Naval constructor	do	Granite...	2	do
D	do	Assistant equipment officer ..	do	do	2	do
E	do	Steam engineer officer.....	do	do	2	do
F	do	General storekeeper.....	do	do	2	do
G	do	Commandant	do	do	3	do
H	U. S. M. C.	Commanding officer marines.	do	do	4	do
I	do	Marines	do	do	4	do
K	do	Officers of marines	do	do	4	do
L	Quarters.....	Captain of yard	do	do	3	do
M	do	Civil engineer.....	do	do	3	do
N	do	Ordnance officer.....	do	do	3	do
O	do	Surgeon	do	do	3	do
1	Y. and D.	Masons' shed, store for lime, sand, cement.	do	do	1	do
3	do	Empty store shed	do	do	2	do
4	C. and R.	Store for brass, oils, lead, etc.	do	Rubble ..	2	Tin on wood.
5	S. and A.	Pay office, labor board	do	do	2	do
5	M. and S. E.	Lyceum, dispensary, watchman.	do	Rubble wall.	3	Slate on wood.
10	C. and R.	Hospital steward's quarters, etc.	do	do	2	do
16	do	Paint shop	do	Concrete ..	1	Corrugated iron.
19	Y. and D.	Iron and brass foundry, plumber shop, molders.	Wood	Posts	2	Tin on wood.
20	Commandant.....	Weigher's office, yard scales.	do	Granite posts.	1	Shingled
21	do	Barn	do	Granite	1	Slate on wood.
22	do	Storehouse	Stone	do	3	do
22	C. and R.	Machine shop and pump house, dry dock No. 1.	do	do	1	do
23	do	Steam box and galvanizing plant.	Brick	Piles.....	1	do
24	C. and R., E.	Construction and repair—offices, rigging workrooms, stores; equipment—rigging loft.	Stone	do	2	do
28	C. and R., Y. and D.	Electric-light plant and stores.	Brick	do	2	do
30	U. S. M. C.	U. S. M. C. officer of day	Wood	Granite...	1	Shingled
31	Y. and D.	Captain of yard and civil engineer's office; telephone office.	Brick	Piles.....	3	Slate on wood.
32	do	Commandant's office.....	do	do	1	do
33	E., S. and A.	Equipment—sail loft, storehouse; supplies and accounts—inspector's office.	Stone	do	3	do
34	S. and A., Y. and D.	Storehouse, yards and docks; supplies and accounts—chaplain; carpenter's office.	Brick	do	3	do
36	C. and R.	Construction and repairs—joiner and block shop, engine and boiler house.	Stone	do	3	do
38	S. and A.	General storekeeper's office and naval prison.	do	Stone piles	3	do
39	E., O., Y. and D...	Equipment—machine shop and office; ordnance—str. office; yards and docks—shops.	Brick	do	3	do

a Formerly chapel.

BUREAU OF YARDS AND DOCKS.

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improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

BOSTON, MASS.—Continued.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft.</i> <i>in.</i>	<i>Ft.</i> <i>in.</i>	<i>Ft.</i> <i>in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
211 7	66 7	23 0	14,120	414,207	1865.....	\$83,601	\$67,500	Fair.
200 9	20 0	10 0	4,018					
208 6	104 4	24 0	21,777					
210 6	90 6	51 0	19,080					
210 6	90 6	51 0	19,080	520,000	1857.....	629,257	500,000	Do.
199 4	65 7	24 0	13,100					
199 4	65 7	24 0	13,100					
285 6	65 5	51 0	18,706					
122 6	60 6	18 0	7,356	69,120	1858.....			Good.
50 6	28 0	14 0	1,416	161,800				
				28,340	1866.....	1,000.00	600.00	Fair.
37 5	23 5	13 0	881	16,650	1863.....	6,500.00	2,000.00	Good.
12 0	12 0	14 0	120	1,960	1863.....	200.00	500.00	Fair.
30 0	22 0	14 0	600	29,040	1866.....	Unknown.	15,000.00	Good.
127 5	50 5	25 0	6,438	213,800				
636 0	45 0	9 0	31,500	1,196,360	1836.....	do	325,000.00	Do.
700 0	45 0	21 0	28,620					
46 6	61 2	21 0	2,851					
60 4	69 9	32 0	4,222					
217 0	22 0	20 0	4,774	120,737	1838.....	do	50,000.00	Do.
140 6	60 5	31 0	8,506	313,000	1837.....	do	80,000.00	Do.
450 0	60 0	16 0	27,000	621,000	1848.....		40,000.00	Do.
450 0	60 0	16 0	27,000	621,000	1848.....	Unknown.	40,000.00	Do.
303 5	106 5	23 0	32,323	969,000	1871.....	do	20,000.00	Fair.
40 0	30 1	17 5	1,204	258,000	1868.....	do	12,000.00	Do.
222 5	75 5	14 5	16,798					
307 4	142 5	22 0	43,594	2,048,868	1825.....	do		Bad.
257 4	142 8	18 0	36,700	1,765,000	1820.....	do		Do.
250 0	60 0	16 0	27,000	621,000	1848.....	do	40,000.00	Good.
450 0	60 0	16 0	27,000	621,000	1849.....	do	40,000.00	Do.
77 8	27 1	17 0	2,108	1,117,800	1848.....	do	200,000.00	Do.
450 0	60 0	32 0	27,000					
95 3	30 0	10 0	2,859	28,590	1866.....	do	350.00	Fair.
187 0	38 3	27 0	7,160	242,804	1852.....	do	30,000.00	Good.
17 0	13 0	25 0	221	5,525	1866.....	do	500.00	Bad.
31 4	16 4	10 0	841	5,000	1869.....	do	300.00	Fair.
90 4	39 7	9 0	3,589	61,030		do		Do.
103 9	40 5	16 5	4,208	71,536	1899.....	do		Do.
120 9	44 6	20 0	5,392	161,760	1899.....	\$15,000.00		Good.
55 3	50 8		2,809			Unknown.		
20 0	6 4	3 0	128				f 25,000.00	
66 3	10 9	3 5	723		1899.....		25,000.00	
50 2	30 2	16 5	1,516	30,320	1900.....		25,000.00	Do.
62 7	12 0	10 0	752	9,024	1900.....			Do.
20 feet diameter.			814		1900.....			

d Elliptical.

e Not built.

f Appropriation.

No. 14.—Statement showing the character, value, and condition of
BOSTON, MASS.—Continued.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
a103	Equipment.....	Chain and anchor storage shed.	Steel and brick.	Concrete	2	Slate on concrete.
a104	C. and R	Shipfitters' shop	do	Concrete and piles.	2	do
a105	do	Smithery and power house...	do	Concrete	2	do
a106	do	Metal-workers' shop.....	do	do	2	do
a107	Y. and D	{Yards and docks—offices, shops, etc.	Brick	do	2	do
a108	Y. and D	Power and boiler house	do	do	1	do
a109	Equipment.....	Coal storage shed.....	Brick and steel.	Pile wharf	1	Steel.....
110	C. and R	Pitch house	do	do	1	do
111	Y. and D	Yards and docks—locomotive	Wood and corrugated iron.	Wood posts.	1	Corrugated iron on wood.
112	Equipment.....	Iron and steel store shed	Corrugated iron.	do	1	Corrugated iron.
113	C. and R	Carpenter and repair shop and storehouse.	do	do	1	Corrugated iron on wood.
114	do	Proposed spar shed and saw-mill.	do	do	1	do
115	Equipment.....	Electrical testing laboratory	Wood and corrugated iron.	Granite, cement.	1	Slate on wood.
116	U. S. M. C	Guardhouse	Wood.....	Wood.....	1	Shingled
117	Y. and D	Stable	{Brick, wood.	{Concrete	{2 1}	{Slate on wood.
118	S. E.....	Water-closets.....	Brick	do	1	Tin
c1	Y. and D	Pier No. 1.....	do	do	do	do
6	do	Pier No. 6.....	Wood.....	Pile	do	do
7	do	Pier No. 7.....	do	do	do	do
8	do	Pier No. 8.....	do	do	do	do
9	do	Pier No. 9.....	do	do	do	do
1	do	Dry dock	Stone	Stone	do	do
c2	do	do	do	Concrete	do	do
3	do	Calsson for dry dock No. 1....	Steel.....	do	do	do
1	do	Reservoir.....	do	do	do	do
2	do	do	do	do	do	do
3	do	do	do	do	do	do
f4	do	do	do	do	do	do
f5	do	do	do	do	do	do
f6	do	do	do	do	do	do

CAVITE, P. I.

aA	Y. and D	Quarters, offices	S. and B..	Stone.....	2	Corrugated iron.
bB	do	Officers' quarters and mess...	B	do	2	do
C	Marines	Barracks	I. and B..	do	1	do
D	do	do	W	do	1	do
E	do	do	B. and W.	do	2	do

a To be built.

b Appropriation

c Under construction.

d Diameter.

No. 14.—Statement showing the character, value, and condition of

CAVITE, P. I.—Continued.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
F	Marines	Old prison	S	Stone	2	Corrugated iron.
G	do	New prison	B	Brick and stone.	1	do
	do	Guardhouse and prison	B	Iron	1	do
H	M. and S	Hospital	B. and S	Stone	2	do
b1	S. and A.	Storehouse	B. and S	do	2	do
b2	S. A. and S. E.	Storehouse, drafting room	B. and S	do	2	do
b3	S. A. and M. S	Storehouse hospital	B. and S	do	2	do
b4	S. and A.	Storehouse and offices	B. and S	do	2	do
c5	S. E.	Machine shop	S	do	1	do
c6	S. E. and E.	Machine shop, sail loft	S	do	2	do
c7	S. E.	Blacksmith shop	S	do	1	do
8	do	Copper and flange shop	S	do	1	do
c9	do	Foundry	S	do	1	do
	do	Stores, coal, wood	B. and S	do	1	do
10	S. and A.	Storehouse	B. and S	do	1	do
11	S. E.	Pattern shop	B. and S	do	1	do
12	S. and A.	Storehouse	B. and S	do	1	do
13	Equipment	Machine shop	B. and S	do	1	do
14	Ordnance	Machine shop and storeroom	B. and S	do	1	do
15	do	Storehouse	S	do	1	Tile
16	S. and A., G. S. K.	do	W	do	1	Corrugated iron.
17	S. and A.	do	S	do	1	Tile
	do	do	B and S	do	1	Corrugated iron.
18	do	Shed	W	do	1	do
	do	do	W	do	1	do
19	do	Storehouse	W. and I.	do	1	do
	do	do	W. and I.	do	1	do
	do	do	B. and S.	do	1	do
20	do	Tailor shop	B. and S.	do	1	do
	do	do	B. and S.	do	1	do
c21	C. and R	Boat, plumbing, and joiner shop.	W	do	1	do
22	C. R. and S. E.	C. and R. offices	B	do	1	do
	do	Power house ways, C. and R.	B	do	1	do
	do	S. E. offices	B	do	1	do
23	S. E. and C. and R.	Boiler and plate shop and boat slip.	S	do	1	do
	do	do	S	do	1	do
	do	do	W	do	1	do
c24	M. and S., E., and S. and A.	Storehouse and offices	W	do	1	do
25	S. and A., E., and Y. and D.	Storehouse, rigging loft, and Y. and D. stores.	I. and B.	do	1	Tile
26	Paymaster. Gun.	Pay office and stores.	W	do	1	Corrugated iron.
f27	C. and R	Sawmill and power house	B	do	1	do
g28	do	Paint shop	W	do	1	do
h29	do	Ship fitters and smiths' shed	W	Concrete	1	Tile
	do	do	W	Stone	1	Corrugated iron.
d30	S. E. and S. A.	Boiler shed, iron racks	W	do	1	do
31	Y. and D.	Blacksmith shop	S	do	1	do
i32	do	Carpenter shop and drafting room.	W	do	1	do
j33	Equipment	Boiler house	S	do	1	do
34	Ordnance	Carpenter shed, blacksmith shop.	W ^k	None	1	do
	do	do	W. and B. l	Stone	1	do
35	do	Storehouse	W	None	1	do
m36	Y. and D.	Distilling plant	W	Stone	1	do

a Cubical contents to eaves.
b Outside and roof bad.
c Roof bad.
d Shed.

e Court, 1,966 square feet.
f Sawmill, engine house, boiler house, unfinished.
g Octagonal.
h Unfinished.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

CAVITE, P. I.—Continued.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
56 0	23 6	24 0	1,316	31,584	1884.....	Unknown.	7,000.00	Good.
52 3	27 3	14 0	1,423	19,922	1900.....	do.....	8,000.00	Do.
30 9	10 9	9 6	330	3,135	1900.....	do.....	2,500.00	Do.
76 0	40 0	24 0	3,040	72,960	1878.....	do.....	18,000.00	Fair.
120 0	39 6	24 0	4,740	113,760	1878.....	do.....	18,000.00	Do.
120 0	39 6	24 0	4,740	113,760	1878.....	do.....	18,000.00	Do.
120 0	39 6	24 0	4,740	113,760	1878.....	do.....	18,000.00	Do.
120 0	39 6	24 0	4,740	113,760	1878.....	do.....	18,000.00	Do.
119 0	32 0	14 0	3,808	53,312	1849.....	do.....	2,500.00	Do.
139 0	32 6	23 0	4,517	34,891	1865.....	do.....	6,000.00	Do.
124 0	57 0	20 0	7,068	141,360	1849.....	do.....	15,000.00	Do.
86 0	75 0	20 0	6,450	129,000	1899.....	do.....	20,000.00	Good.
83 0	80 0	13 0	6,640	186,320	1871.....	do.....	10,000.00	Fair.
88 0	27 0	13 0	2,376	40,888	1871.....	do.....	4,000.00	Do.
63 0	41 0	13 0	2,583	33,579	1871.....	do.....	5,000.00	Do.
36 0	44 0	13 0	1,584	20,592	1871.....	do.....	3,000.00	Good.
36 0	27 0	13 0	972	12,636	1871.....	do.....	3,000.00	Do.
69 0	36 0	10 6	2,480	26,082	1871.....	do.....	10,000.00	Do.
82 0	36 0	10 6	2,952	30,996	1870.....	do.....	10,000.00	Do.
44 0	23 0	9 6	1,012	9,614	1870.....	do.....	4,000.00	Do.
175 0	16 6	8 0	2,887	23,100	1902.....	do.....	3,500.00	Very good.
103 0	29 6	8 6	3,038	25,823	1863.....	do.....	2,000.00	Poor.
70 6	84 6	9 9	2,432	23,714	1886.....	do.....	8,000.00	
72 0	21 9	9 0	1,566	14,094	1886.....	do.....	1,000.00	Good.
47 0	21 0	9 0	1,010	9,090	1886.....	do.....	500.00	
115 0	45 0	9 3	5,290	47,610	1885.....	do.....	18,000.00	Do.
104 0	23 0	9 3	2,392	21,528	1885.....	do.....		
37 0	23 0	9 3	851	7,659	1885.....	do.....		
13 6	9 6	9 0	128	1,154	1885.....	do.....	75,000.00	Do.
26 0	6 3	8 0	162	1,296	1885.....	do.....		
10 0	6 0	7 0	50	420	1885.....	do.....		
355 0	44 6	15 0	15,797	236,955	1860.....	do.....	10,000.00	Weak.
49 9	23 0	16 0	4,875	78,000	1880.....	do.....	25,000.00	Very good.
49 9	52 0							
49 9	23 0							
231 0	38 0	21 0	8,952	187,992	1881.....	do.....	30,000.00	dGood.
185 0	38 9	21 0	7,168	150,528				
153 0	19 6	8 9	2,983	26,090				
24 9	19 0	7 6	483	3,622	1891.....	do.....	25,000.00	Very good.
134 0	85 6	14 6	9,243	134,023				
154 0	56 8	10 9	8,701	93,537	1882.....	do.....	15,000.00	Good.
58 0	21 6	12 6	1,247	15,587	1884.....	do.....	4,000.00	Do.
112 9	50 0	15 0	5,637	84,555				
56 4	32 3	15 0	1,816	27,240	1902.....	\$13,608.00	13,600.00	Very good.
42 4	32 3	15 0	1,365	20,475	1864.....	Unknown.	600.00	Good.
34 0	34 0	8 6	688	5,831				
75 0	60 0	18 0	4,500	81,000	1902.....	\$10,752.00	10,750.00	Very good.
120 0	48 0	18 0	5,760	103,680	1902.....	10,697.00	10,700.00	Excellent.
20 6	16 0	11 0	472	5,192	1901.....	450.00	500.00	Very good.
75 0	30 0	13 6	2,250	30,375	1901.....	1,300.00	1,200.00	Do.
38 0	38 6	11 3	1,483	16,686	1902.....	Unknown.		Do.
31 0	13 6	7 6	418	3,135	1900.....	do.....	100.00	Good.
10 0	10 6	11 0	110	1,210	1884.....	do.....	200.00	
46 6	20 6	9 0	953	8,575	1901.....	\$550.00	450.00	Do.
35 9	22 9	10 0	813	8,333	1901.....	Unknown.	500.00	Do.

† Part shed.

/ Built by ordnance.

* Carpenter shop.

! Blacksmith shop.

m Built of old material.

No. 14.—Statement showing the character, value, and condition of
CAVITE, P. I.—Continued.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
a37	C. and R.	Machine, blacksmith shop, and foundry.	W	Stone	1	Corrugated iron.
b38	Equipment	Offices, rigging loft, etc	W	Stone	1	Corrugated iron.
39	M. and S.	Stable	W	Stone	1	Corrugated iron.
40	Y. and D.	do	W	do	1	do
41	do	Lime, plumbers' shed	W	do	1	do
42	do	Paint shop	W	do	1	do
c43	Ordnance	Watchmen's quarters	S	do	1	Tile
d44	Y. and D.	Not in use	S	do	1	do
d45	do	Watchmen's quarters	S	do	1	do
e46	S. E.	Boiler house	W	do	1	Corrugated iron.
f47	Y. and D.	Storeroom	W	do	1	do
(v)	do	Chapel	S	do	1	Steel
	S. E.	Oil house	B.	do	1	Corrugated iron.
	Y. and D.	Mess room, petty officers	W	do	1	do
(h)	M. and S.	Laundry to hospital	W	do	1	do
	do	Kitchen to hospital	W	do	1	do
	Ordnance	Ordnance office	B. and S.	do	1	do
	Y. and D.	Yards and docks office	B. and S.	do	1	do
	Marines	Guardhouse	S	do	1	Tile
	do	Bathroom	B.	do	1	Corrugated iron.
(i)	do	Storeroom	B.	do	1	do
	do	Kitchen to building "C"	W	do	1	do
	Y. and D.	Cook house to "B"	B.	do	1	do
	do	Laundry building "B"	W	do	1	do

CHARLESTON, S. C.

(j)	Y. and D	Vacant	B	Brick	2	Tin
	do	To be used as stable	W	Wood and brick.	1	Shingle
(k)	do	Used by keeper	W	do	1½	do
(l)	do	Civil engineer office	W and B.	Brick	3½	do

DRY TORTUGAS, FLA.

m A	Marine Corps	Boat house	Wood	Brick	1	Wood
n B	do	Barracks	Brick	Concrete	3	Galvanized iron.
o C	do	Latrine	do	do	1	do
p E	Equipment	Distilling house	Steel and wood.	do	1	Tile
F	do	Standpipe	Steel	Steel and concrete.	1	Copper
G	do	Cistern	do	do	1	do
r L	do	Storage of coal	Wood	Piles	1	Wood
s T	do	Not occupied	do	do	1	do
t N		Under construction	Steel	Concrete	1	Corrugated iron, galvanized.
u S		do	do	do	1	do

a Shed; roof poor.

b Under contract.

c At one place 32 feet 6 inches wide.

d Greatly repaired, 1902.

e Shed between 6 and 7.

f Between 7 and 8.

g Octagonal.

h Paid for by Medicine and Surgery.

i Coal shed 20 feet 9 inches by 9 feet 6 inches by 7 feet 9 inches additional.

j Turnbull House.

k Keeper's cottage.

l Lawton House.

m Built by U. S. Marine Hospital Service for a coal shed.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

CAVITE, P. I.—Continued.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
88 0	84 0	15 0	7,392	160,880	{1873..... 1901.....}	Unknown.	\$3,000.00	Poor.
30 3	20 0	11 9	605	7,108	1899.....	Unknown.	640.00	Good.
30 3	20 0	11 9	605	7,108	1900.....	do	800.00	Do.
29 0	8 3	7 0	239	1,659	{1888..... 1901.....}	do	600.00	Do.
29 0	11 3	11 3	339	3,475	1901.....	\$200.00	200.00	Do.
19 2	16 0	10 6	3,955	41,527	1895.....	Unknown.	8,000.00	Very good
23 6	20 0	11 0	550	1,290	1874.....	do	2,000.00	Do.
30 0	11 6	9 0	345	3,105	1874.....	do	1,000.00	Good.
113 6	45 0	11 0	5,107	56,182	1902.....	\$3,203.00	3,200.00	Do.
40 0	13 0	8 0	550	5,280	1899.....	Unknown.	150.00	Fair.
28 0	28 0		487	8,522	1854.....	do	3,000.00	Good.
9 9	9 9	8 0	95	760	1884.....	do	300.00	Do.
38 9	15 0	10 9	579	6,225	1900.....	do	750.00	Do.
18 6	16 3	9 9	300	2,925	1901.....	\$750.00	750.00	Excellent.
20 3	16 3	9 9	329	3,200	1900.....	Unknown.	900.00	Good.
36 0	13 6	10 6	486	5,103	1870.....	do	2,000.00	Do.
36 0	13 6	10 6	486	5,103	1870.....	do	2,000.00	Do.
28 6	16 6	12 0	418	5,106	1894.....	do	1,000.00	Very good.
40 0	21 6	7 9	840	6,240	1884.....	do	500.00	Fair.
56 6	13 6	7 9	898	6,659	1884.....	do	500.00	Do.
20 0	20 0	7 8	400	3,100	1900.....	do	450.00	Very good.
13 3	9 9	8 9	129	1,129	1873.....	do	600.00	Good.
14 0	9 3	6 6	130	845	1901.....	do	350.00	Do.

CHARLESTON, S. C.

60 0	50 0	21 0	3,000	43,500	Unknown ...	Unknown .	\$3,200	Poor.
20 0	28 6							
92 0	19 0	12 6	2,320	38,950	do	do	1,200	Fair.
20 0	28 6							
45 0	37 0	18 0	1,880	41,000	do	do	2,900	Do.
56 0	52 0	38 0	2,912	98,010	do	do	7,000	Do.

DRY TORTUGAS, FLA.

50 0	30 0	6 5	1,500	9,000				Fair.
840 0	38 0	43 5	13,000	410,000				Do.
24 0	9 0	8 0	220	1,000	1898.....			Do.
44 0	44 0	27 0	1,940	45,000	1901.....			
51 0	33 0	17 0	1,680	26,000	1901.....	\$9,000.00	\$13,500.00	Excellent.
25 feet diameter.		57 0	500	200,000	1901.....	7,000.00	10,000.00	Do.
56 feet diameter.		13 0	2,500	200,000	1901.....	9,000.00	12,000.00	Do.
150 0	30 0	14 5	4,500	65,000				Fair.
15 0	12 0	10 5	180	2,000				Good.
250 0	105 0	20 0	26,000	525,000	1900.....	110,000.00	110,000.00	Do.
250 0	105 0	20 0	26,000	525,000	1900.....	110,000.00	110,000.00	Do.

* Built by U. S. Army for barracks, about 1870. Only half of the rooms finished. Roof leaking.

o Built by U. S. Army.

p Built in place of original temporary structure D, removed.

q Gallons.

r Built by U. S. Light-House Board for the storage of buoys.

s Built by U. S. Light-House Board for blacksmith shop.

t North coal shed. Building practically completed, except for painting.

u South coal shed. Building practically completed, except for painting.

No. 14.—Statement showing the character, value, and condition of
 DRY TORTUGAS, FLA.—Continued.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
Q ^a	Marine Corps, Y. and D. equipment.	Officers' quarters	Brick.....	Concrete ..	3	Galvanized iron.
W ^b	do	Wharf house	Wood.....	Piles.....	1	Wood.....
X ^c	Y. and D	Boats and shelter.....	do.....	Wood.....	1	do.....
K1 ^d	Marine Corps.....	Blacksmith shop	Brick.....	Concrete ..	1	Slate
K2 ^d	do	Wash room	do.....	do.....	1	do.....
K3 ^d	do	Kitchen	do.....	do.....	1	do.....
K4 ^d	do	Storeroom	do.....	do.....	1	do.....
K5 ^e	Y. and D	Employees' kitchen	do.....	do.....	2	Wood.....
K6 ^e	Vacant	do.....	do.....	do.....	2	do.....
K7 ^e	do	do.....	do.....	do.....	2	Slate
K8 ^e	do	do.....	do.....	do.....	2	do.....
K9 ^e	do	do.....	do.....	do.....	2	Wood.....
K10	Marine Corps.....	Officers' kitchen.....	do.....	do.....	2	do.....
K11	do	Hospital steward's kitchen.....	do.....	do.....	2	do.....
K12	Equipment.....	Employees' kitchen	do.....	do.....	2	do.....
K13 ^f	do	do.....	do.....	do.....	2	Slate
K14 ^f	Vacant	do.....	do.....	do.....	2	do.....
K15	Marine Corps.....	First sergeant's quarters	do.....	do.....	2	do.....

ISLAND OF GUAM.

		PROPERTY OF THE NAVAL ESTABLISHMENT.				
1	Y. and D	Government house	Stone and timber.	Stone.....	2	Galvanized iron.
8	do	Saw mill.....	Redwood ..	Wood and concrete.	2	do.....
9	S. E.....	Machine shop	do.....	Wood posts ..	1	do.....
10	Y. and D	Distilling plant.....	Concrete..	Concrete..	1	do.....
13	do	Band stand.....	Bamboo .....	.....	1	Thatch
14	do	Mule shed	Wood.....	Posts	1	Galvanized iron.
16	do	Forage shed	Stone	Stone.....	1	Tile
17	do	Oil shed	do.....	do.....	1	do.....
18	do	Officers' quarters.....	Wood.....	Wood and posts.	1	Galvanized iron.
19	Equipment.....	Meteorological station.....	Stone	Stone.....	1	Tile
20	Y. and D	Boiler house.....	Wood.....	Wood.....	1	Galvanized iron.
21	do	Coal shed, Agana.....	do.....	do.....	1	do.....
100	do	Boat wharf, Piti.....	do.....	do.....	1	do.....
101	do	Boat shed, Piti.....	do.....	do.....	1	Thatch
102	do	G. S. K. warehouse, Piti.....	Stone.....	Stone.....	1	Galvanized iron.
103	do	Coal shed, Piti.....	Wood.....	Wood.....	1	do.....
104	do	Officers' quarters	do.....	do.....	1	do.....

Rented property omitted from this report.

Sewer system: 8-inch vitrified pipe, cement joints, 860 feet; 6-inch vitrified pipe, cement joints, 1,910 feet; 5-inch black iron soil pipe, 490 feet; 3-inch and 4-inch iron drain pipe, 690 feet.

Flushing water system: 2-inch black iron pipe, 2,000 feet.

Distilled water system: 2-inch galvanized iron pipe, 1,700 feet.

Rain-water cistern: 20 feet diameter, 10 feet deep, floor 1-foot concrete on coral rock. Concrete walls, 16-inch bottom, 12-inch top. Capacity, 20,000 gallons. Galvanized iron roof, guttering and leaders from adjacent buildings.

^a Built by U. S. Army about 1845 and 1860 for officers' quarters.

^b House on wharf; only partially closed in; built by U. S. Marine-Hospital Service about 1890; repaired 1902.

^c Probably built by U. S. Army before 1860 for workshop.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

DRY TORTUGAS, FLA.—Continued.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
288 0	44 0	45 5	13,000	440,000	.....	.....	.....	Poor.
121 0	24 0	15 4	3,000	43,000	.....	.....	.....	Good.
62 0	26 0	9 4	1,612	14,000	.....	.....	.....	Worthless except for shelter.
32 0	20 0	9 0	640	4,500	.....	.....	.....	Poor.
32 0	20 0	9 0	640	4,500	.....	.....	.....	Fair.
32 0	20 0	9 0	640	4,750	.....	.....	.....	Poor.
32 0	20 0	9 0	640	4,500	.....	.....	.....	Do.
31 0	20 0	19 6	620	8,400	.....	.....	.....	Do.
16 0	20 0	19 6	320	4,200	.....	.....	.....	Do.
31 0	20 0	19 6	620	8,400	.....	.....	.....	Do.
16 0	20 0	19 6	320	4,200	.....	.....	.....	Fair.
16 0	20 0	19 6	320	4,200	.....	.....	.....	Do.
31 0	20 0	19 6	620	8,400	.....	.....	.....	Do.
16 0	20 0	19 6	320	4,200	.....	.....	.....	Poor.
31 0	20 0	19 6	620	8,400	.....	.....	.....	Fair.
31 0	20 0	19 6	620	8,400	.....	.....	.....	Do.
16 0	20 0	19 6	320	4,200	.....	.....	.....	Poor.
31 0	20 0	19 6	620	8,400	.....	.....	.....	Fair.

ISLAND OF GUAM.

150 0	43 0	22 0	6,476	168,400	.....	.....	\$13,000.00	Good.
70 0	24 0	17 0	1,680	33,600	Aug., 1901 ...	\$2,600.00	2,600.00	Do.
32 0	13 0	7.5 0	416	5,000	Dec., 1900....	.....	200.00	Fair.
46 0	24 0	6.4 0	1,104	10,800	1900 .....	.....	1,000.00	Do.
20 0	20 0	8 0	277	2,700	June, 1901 ...	75.00	40.00	Poor.
42 0	26 0	9 0	1,099	13,300	do	500.00	500.00	Good.
44 0	25 0	9 0	1,100	12,000	.....	.....	600.00	Fair.
17 0	12 0	7 0	204	1,632	.....	.....	100.00	Do.
48 0	30 0	13 0	1,340	22,000	Sept., 1901 ...	600.00	600.00	Good.
16 0	12 0	8 0	192	1,920	.....	.....	200.00	Fair.
36 0	21 0	20 0	756	16,632	Sept., 1901 ...	600.00	600.00	Good.
40 0	20 0	8 0	800	7,200	.....	400.00	400.00	Do.
85 0	17 0	6.3 0	1,428	8,925	May, 1901....	400.00	400.00	Do.
39 0	12 0	6.6 0	468	3,042	.....	.....	50.00	Fair.
78 0	31½ 0	9 0	2,457	22,113	.....	.....	2,000.00	Good.
50 0	20 0	9 0	1,000	9,000	May, 1901....	400.00	400.00	Do.
20½ 0	17 0	7 0	348	2,784	1900 .....	.....	150.00	Fair.

Walls and fences: Stone wall inclosing Government house grounds, 940 feet.

Sidewalks: Length rebuilt with concrete in front of Government house, 170 feet.

Water tower: Timber 12 by 12 feet at base, 20 feet high.

Windmill: Tower, timber; base, 14 by 14 feet, height, 30 feet; capacity tank, 9,000 gallons; diameter windmill, 14 feet.

Telephone line: Agaña to Piti, 5½ miles; connections, three-fourths of a mile.

d Double kitchens in rear of barracks; built by U. S. Army prior to about 1860.

e Double and single kitchens in rear of officers' quarters; built by U. S. Army about 1845 and 1860.

f Double and single kitchen buildings.

REPORT OF THE SECRETARY OF THE NAVY.

No. 14.—Statement showing the character, value, and condition of
U. S. NAVAL STATION, HAWAII.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
a1	Equipment	Coal shed	Wood	Pile	1	Iron
a2	do	do	do	do	1	do
a3	do	do	do	do	1	do
a4	do	do	do	do	1	do
a5	Pay department	Paymaster's office	do	Posts	1	Shingle
b6	General use	Commandant's office, civil engineer's office, etc.	do	do	2	do
bA	Dwelling	Carpenter's quarters	do	do	1	do
bB	do	Watchman's quarters	do	do	1	do
(b)		Macadamized roads				
(b)		Fencing, with gates				
(b)		Curbing				

KEY WEST, FLA. .

A	Y. and D	Commandant's	Wood	Brick	2	Galvanized shingle.
B	do	Paymaster's	do	do	2	do
1	S. and A.	Storehouse	Brick	Concrete on sand.	2	Slate
2	Equipment	Condensing plant	Wood	Brick piers	1	Galvanized shingle.
c3	Y. D. and S. and A.	Pumping plant	do	Sand	1	Wood shingle.
d4	S. and A.	Scale house	do	Brick	1	do
5	All departments	Carpenter shop	do	Wood	1	do
e6	S. and A.	Storing oils, etc	do	Sand	1	do
f7	S. E	Machine shop	Brick and iron.	Piles	1	Tile
8	do	Machine shop office	Brick	Concrete on sand.	2	do
g9	do	Foundry	do	do	1	Slate
h10	C. and R	Shop and store	Wood	Brick piers	1	Tin
i11	S. E	Smith shop				
j12	do	Storehouse	Wood	Sand	1	Tin
k14	Equipment	Coal shed	do	Concrete piers.	1	Wood shingle.
15	do	do	do	do	1	do
16	do	do	do	do	1	do
17	do	do	do	do	1	do
19	Y. and D	Launch crew house	do	Sand	1	do
20	C. and R.	Proposed shop				
l21	Equipment	Proposed storehouse	Brick and steel.	Piles	2	Tile
22		Pier B	Steel	Rock		
m23		Pier A	do	Sand		
n24	Equipment	North bridge tramway P. B.	do	Pier		
n25	do	South bridge tramway P. B.	do	do		
o26	do	Circular cistern	Concrete	Sand		Wood
o27	do	do	do	do		do
p28	S. E	Rectangular cistern	do	do		do
p29	Equipment	Coal shed A	Steel	Piles	1	Galvanized iron.
30	do	Coal shed B	do	do	1	do
n31	do	North bridge tramway P. A.	do	Pier		
n32	do	South bridge tramway P. A.	do	do		
33	S. E. and C. and R.	Shop	Wood	Brick piers	1	Tin

a Built by equipment.

b Built by yards and docks.

c Old building.

d New building.

e Date of completion and cost not known.

f Cost, including floor.

g Needs new windows.

h Needs to be raised and new foundation built.

i Proposed.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

U. S. NAVAL STATION, HAWAII.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
173 0	150 0	.....	25,950	.....	1899.....	\$8,000.00	\$8,000.00	Excellent.
173 0	121 0	.....	20,933	.....	1899.....	16,000.00	16,000.00	Do.
238 0	178 0	.....	42,364	.....	1899.....	12,000.00	12,000.00	Do.
205 0	94 0	.....	19,270	.....	1899.....	5,200.00	5,200.00	Do.
40 0	18 0	.....	720	.....	1899.....	1,700.00	1,700.00	Do.
40 0	40 0	.....	1,600	.....	1901.....	2,999.56	2,999.56	Do.
32 0	45 0	.....	1,440	.....	1901.....	2,037.00	2,037.00	Do.
24 0	27 0	.....	.....	.....	1901.....	454.07	454.07	Do.
814 0	.....	.....	.....	.....	.....	1,253.80	.....	Do.
2,930 0	.....	.....	.....	.....	.....	2,731.85	.....	Do.
3,101 66	.....	.....	.....	.....	.....	1,186.70	.....	Do.

KEY WEST, FLA.

51 0	31 0	23 0	31,000	.....	1890.....	\$4,000.00	\$2,600.00	Fair.
51 0	31 0	23 0	13,000	.....	1890.....	4,000.00	2,600.00	Do.
184 0	80 0	22 0	17,500	264,000	1860.....	75,000.00	30,000.00	Do.
52 0	38 0	20 0	6,600	58,300	1898.....	2,400.00	2,000.00	Do.
20 0	10 0	8 0	550	1,600	1898.....	40.00	10.00	Poor.
10 0	10 0	10 0	570	1,360	1898.....	40.00	40.00	Good.
45 0	16 0	12 0	1,550	6,700	1899.....	350.00	300.00	Do.
25 0	16 0	10 0	950	4,000	.....	.....	50.00	Poor.
208 0	60 0	18 0	15,200	207,600	1899.....	33,000.00	33,000.00	Good.
31 0	22 0	25 0	2,100	11,100	1899.....	.....	.....	Do.
73 0	43 0	19 0	7,800	54,000	1873.....	8,000.00	5,000.00	Fair.
56 0	16 0	10 0	1,400	9,000	1898.....	500.00	300.00	Good.
30 0	12 0	8 0	750	2,700	.....	8,000.00	.....	.....
160 0	50 0	12 0	5,700	93,000	1898.....	40.00	5.00	Very poor.
152 0	50 0	12 0	2,200	89,000	1898.....	.....	.....	.....
152 0	50 0	12 0	2,200	89,000	1898.....	13,000.00	10,000.00	Good.
152 0	50 0	12 0	4,000	89,000	1898.....	.....	.....	.....
14 0	11 0	10 0	550	1,170	1900.....	140.00	150.00	Do.
161 10	61 10	33 0	.....	.....	.....	50,000.00	.....	.....
304 0	50 0	.....	46,000	.....	1899.....	60,000.00	60,000.00	Do.
270 0	30 0	.....	.....	.....	1883.....	30,000.00	5,000.00	Very poor.
228 0	.....	55 0	.....	.....	1900.....	19,625.00	19,625.00	New.
228 0	.....	55 0	.....	.....	1900.....	19,625.00	19,625.00	Do.
50 feet diameter.	8 6	.....	90,000	g	.....	3,000.00	1,200.00	Fair.
50 feet diameter.	8 6	.....	90,000	g	.....	3,000.00	1,200.00	Do.
.....	.....	.....	23,000	q	.....	500.00	400.00	Good.
150 0	100 0	20 0	100,000	295,000	1900.....	80,000.00	80,000.00	New.
250 0	75 0	20 0	130,000	495,000	1900.....	110,000.00	110,000.00	Do.
318 0	.....	55 0	.....	.....	1900.....	19,625.00	19,625.00	Do.
318 0	.....	55 0	.....	.....	1900.....	19,625.00	19,625.00	Do.
112 0	23 0	18 0	3,000	51,000	1898.....	1,730.00	1,000.00	Good.

f Should be condemned.

* Built by Penn Bridge Co., Beaver Falls, Pa.

l In course of construction.

m Needs to be renewed.

n Being painted.

o Recently relined.

p Needs new roof.

q Gallons.

No. 14.—Statement showing the character, value, and condition of
LEAGUE ISLAND, PA.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
A	Y. and D.	Commandant's quarters.	Brick.	Piles.	3	Slate.
B	do	Captain of yard's quarters.	Frame.	Brick piers.	3	Shingle.
C	do	Surgeon's quarters.	do	do	3	do
K	do	Chief engineer's quarters.	do	do	3	do
L	do	Equipment officer's quarters.	do	do	3	do
M	do	Ordnance officer's quarters.	do	do	3	do
N	do	Naval officer's quarters.	do	do	3	do
R	do	Dwelling.	do	do	2	do
S	do	do	do	do	2	do
W	do	do	do	do	2	do
1	do	Y. and D. offices, joiner, tinner, machine, and plumber shops; electric light and power plant, wood working mill, and storehouse for furniture, etc.	Brick.	Pile.	2	Slate.
2	do	Boiler and engine house for supplying power, heat, and light.	do	do	1	do
3	C. and R.	Iron-plating shop.	do	do	1	do
4	S. E. and S. and A.	Steam engineering offices and machine shop, general storekeeper's offices, and general storehouse for yard.	do	do	3	Mansard, slate, and iron.
6	Y. and D.	Commandant's, captain of the yard's, yard paymaster's, and telephone offices, and court-martial and board rooms.	Stone.	Pile, stone, and cement.	3	Slag.
a7	C. and R.	Mold loft and docking apparatus.	Brick.	Pile.	2	Tin.
8	S. and A.	Storehouse.	Corrugated iron.	do	1	Corrugated iron.
b9	Equipment.	Boiler house.	do	Concrete.	1	do
c10	do	Workshop and storehouse.	Brick.	Pile.	2	Slate.
d11	C. and R.	Block, cooper, and spar shops.	Brick and steel.	Concrete on piles.	2	do
e12	do	Plate-bending shop.	do	do	2	do
f14	do	Angle smithery.	do	do	1	Tile.
f15	do	Smithery shop.	do	do	1	do
f21	Y. and D.	Pump house, dry dock No. 2.	Brick.	do	2	Slate.
f22	do	Boiler and engine house, dry dock No. 2.	do	do	1	do
24	C. and R.	Paint shop.	Iron.		1	Corrugated iron.
f25	do	Plumbers' and coppersmiths' shop and foundry.	Brick and steel.	Concrete on piles.	2	Tile B. H.
g26	Ordnance.	Workshop and boiler house.	Brick.	do	2	Slate.
a27	Equipment.	Boiler house extension ^b and chain shed and anchor rack.	Galvanized steel.	Concrete on piles.	1	Galvanized steel.
c28	S. and A.	Shed for combustibles.	Brick.	do	1	Slate.
29	Equipment.	Storehouse for ships' equipment and fireproof storehouse.	do	do	2	do
a30	Y. and D.	Garbage incinerating plant.	do	do	1	Corrugated iron.
a31	C. and R.	Water-closet.	Concrete and wood.	Concrete.	1	Shingle.
104	Y. and D.	Assistant captain of the yard's office.	Frame.	Stone and brick.	2	do

^a Under construction.

^b Building completed, but heating system only partly installed.

^c Extension under construction.

^d Not fully completed.

^e Nearly completed.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

PUGET SOUND, WASH.—Continued.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Fl. in.</i>	<i>Fl. in.</i>	<i>Fl. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
76 0	41 0	17 0	3,116	75,000	May 31, 1897	\$1,439.93	\$1,500.00	Good.
24 0	18 0	9 0	432	5,200	Oct. 15, 1897	50.00	50.00	Do.
12 0	12 0	8 0	144	1,400	June 15, 1897	20.00	20.00	Do.
170 0	121 0	16 0	20,570	431,000	Sept. 26, 1898	5,579.04	5,579.00	Do.
52 0	36 0	17 0	1,872	48,000	Mar. 6, 1899	5,180.00	5,180.00	Do.
242 0	93 0	44 0	24,356	867,000	Sept. 25, 1900	55,719.00	56,000.00	Do.
50 0	31 0							
10 0	8 0	11 0	80	1,000	June 9, 1899	16.00	16.00	Do.
32 0	8 0	8 0	256	2,400	June 15, 1899	307.00	307.00	Do.
8 0	6 0	6 0	48	330	do	15.00	15.00	Do.
23 0	8 0	7 0	184	1,500	do	25.00	25.00	Do.
16 0	14 0	10 0	224	3,000	Aug. 31, 1899	15.00	15.00	Do.
30 0	26 0	9 0	780	10,400		40.00	200.00	Do.
30 0	23 0	10 0	690	9,600			100.00	Fair.
36 0	10 0	9 0	360	3,800	Dec. 31, 1899	20.00		
16 0	16 0	40 0	256	5,000	Jan. 31, 1900	125.00	125.00	Good.
20 0	16 0	10 0	320	4,000	Apr. 15, 1900	247.01	250.00	Do.
31 0	28 0	16 0	868	18,000	Oct. 19, 1900	3,000.00	3,000.00	Do.
30 0	16 0	13 0	480	7,200	May 7, 1901	1,000.00	1,000.00	Do.
41 0	20 0	12 0	820	10,100	June 7, 1901	1,700.00	1,700.00	Do.
34 0	26 0	12 0	884	9,350	Sept. 25, 1901	2,050.00	2,050.00	Do.
34 0	26 0	12 0	884	9,350	do	2,050.00	2,050.00	Do.
150 0	50 0	20 0	7,500	172,500	Jan. 12, 1902	9,966.00	9,966.20	Do.
61 5	50 0	12 0	3,700	69,000	May 19, 1902	5,813.00	5,813.88	Do.
31 5	32 0							
22 0	22 0	12 0	450	4,650	Jan. 11, 1902	1,566.00	1,566.44	Do.
31 0	24 0	19 0	744	17,400	June 2, 1902	3,000.00	3,000.00	Do.
100 0	40 0	14 0	4,000	76,700	Feb. —, 1901	4,317.25	4,817.25	Do.
30 0	15 0	10 0	450	4,500	May —, 1901	292.19	292.19	Do.
30 0	20 0	20 0	600	12,000	June 30, 1902	2,654.00	2,654.66	Do.
200 0	50 0	16 0	10,000	228,000	Sept. 7, 1901	4,351.00	4,350.99	Do.
60 0	32 0	16 0	1,920	32,640	Sept. 6, 1901	3,882.00	2,882.00	Fair.
80 0	34 0	16 0	2,720	58,480	Aug. 6, 1901	1,858.54	1,858.00	Good.
100 0	40 0	16 0	4,000	105,800	Feb. 18, 1902	2,880.99	2,881.00	Do.
40 0	30 0			(u)	Apr. 24, 1897	7,750.10	7,750.10	Do.
12 0			(h)		Jan. 26, 1901	8,677.50	8,677.50	Do.
362 0	16 0				July 9, 1901	4,683.17	4,683.17	Do.
32 0	80 0							

e Height.
f Diameter.

g Capacity, each, 200,000 gallons.
h Length, 9,750 feet.

No. 14.—Statement showing the character, value, and condition of

PUGET SOUND, WASH.—Continued,

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
<i>Miscellaneous improvements—Continued.</i>						
Y. and D.		Pile wharf No. 2 (Nipsic) . . .	Pile . . .			
do		{ Pile wharf No. 3 (dry-dock wharf).	{ do . . .			
do		1 pillar crane, 5-ton, 15-foot radius.	do . . .	Concrete . . .		
do		1 pillar crane, 15-ton, 30-foot radius.		do . . .		
do		1 foot walk, 194 by 8 feet from shore to first dolphin.				
do		4 dolphins, east of dry-dock entrance.				
do		1 winter wharf drop, south end of wharf No. 3.				
do		1 brick well, 50 feet inside diameter, depth 25 feet.				
do		1 brick well, 15 feet 3 inches inside diameter, depth 16 feet 6 inches.				
do		1 brick well, 7 feet 2 inches inside diameter, depth 16 feet 0 inches.				
do		1 yard scow, Rex, about 75 by 25 by 7 feet.				
do		2 steel buoys, with anchors, in front of dry dock.				
Equipment		1 steel buoy, with anchors, in front of dry dock.				
Y. and D.		3 electric motors and controllers.				
do		3 Providence improved dock capstans.				
do		1 telegraph and telephone line, about 7 miles long.				

SAN JUAN, P. R. ^a

^a A	Quarters	Commandant	Rubble . . .	Rubble . . .	2	Brick
B		Marine guardroom	do . . .	do . . .	1	do
C	Quarters	Civil engineer	do . . .	do . . .	1	do
E	do	Surgeon	do . . .	do . . .	1	do
G	do	Hospital steward	do . . .	do . . .	1	do
1		General offices	do . . .	do . . .	1	do
2	Marines	Kitchen, mess hall	do . . .	do . . .	1	do
3	M. and S.	Hospital	Wood . . .	Brick . . .	1	Tin
	do	do	Rubble . . .	Rubble . . .	1	Brick
4	Y. and D.	Quarters	do . . .	do . . .	1	do
	Marines	Guardhouse				
5	do	Squad room, stores	Rubble . . .	Rubble . . .	1	Brick
^b 6						
7	G. S. K.	Equipment stores	Rubble . . .	Rubble . . .	1	Brick
	Marines	Brig				
8	G. S. K.	Stores	Rubble . . .	Rubble . . .	1	Brick
9	Marines	Squad room	do . . .	do . . .	1	do
10	Y. and D.	Shops, fire pumps, distilling plant, electric plant, coal, laundry.	do . . .	do . . .	1	do
^c 11						
^c 12						

^a Buildings have flat roofs; heights have been measured to cornice. Cubical contents have been calculated with average heights of roof. All roofs have considerable pitch, generally in two directions.

^b No. 6, see G.

^c No. 11, see Nos. 1 and 2.

^d No. 12, see A.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

PUGET SOUND, WASH.—Continued.

Dimensions of buildings.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
360 0	14 0	One section.			Aug. 1, 1901	\$1,480.00	\$1,480.00	Good.
40 0	14 0				July 27, 1901	20,191.00	20,191.60	Do.
500 0	50 0				Mar. 14, 1901	26,196.00	26,196.55	Do.
344 0	50 0					1,500.00	1,500.00	Do.
					Apr. 3, 1902	5,000.00	5,000.00	Do.
					Feb. 11, 1902	500.00	500.00	Do.
					Oct. 3, 1901	1,125.00	1,125.00	Do.
					Mar. 14, 1901	434.50	434.50	Do.
					May 10, 1901	7,860.00	7,860.00	Do.
					Dec. 23, 1896	581.59	581.59	Do.
					Sept. 13, 1901	2,677.69	2,677.69	Do.
					Jan. 6, 1896	1,500.00	1,500.00	Do.
					Apr. 29, 1902	1,200.00	1,200.00	Do.
					Feb. 25, 1902	2,478.75	2,478.75	Do.
					Feb. 24, 1902	1,197.00	1,197.00	Do.
					Feb. 10, 1899	2,988.50	3,988.50	Do.

SAN JUAN, P. R. ^a

54 0	33 0	31 0	1,615	48,450	Unknown	\$1,000.00	Good.
60 0	25 0						
55 0	38 0						
50 0	31 0						
38 0	34 0	18 0	990	16,830	Unknown	1,000.00	Fair.
115 0	72 0	21 0	6,400	114,450	do	8,700.00	Good.
94 0	46 0	19 0	4,512	75,960	do	3,300.00	Poor.
12 0	10 0	8 0	120	960	do	4,000.00	Good.
82 0	58 0	18 0	3,250	55,250	do		Do
145 0	60 0	16 0	5,760	92,160	do	6,000.00	Fair.
102 0	48 0	18 0	2,740	43,840	Unknown	4,000.00	Good.
75 0	24 0	16 0	1,680	23,520	Unknown	1,700.00	Do.
101 0	73 0	16 0	2,290	34,350	Unknown	3,200.00	Do.
103 0	24 0	18 0	2,410	38,560	do	2,500.00	Do.
110 0	89 0	16 0	5,170	77,130	do	4,800.00	Fair.

No. 14.—Statement showing the character, value, and condition of

SAN JUAN, P. R.—Continued.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
13	Y. and D.	Library	Rubble	Rubble	1	Brick
14	do	Quarters for men	do	do	1	do
15	Marines	Carpenter shop	Rubble	Rubble	1	Brick
16	G. S. K.	Stores	do	do	1	do
17	Y. and D.	Paint shop	Brick and wood.	None	1	Tin
18	do	Latrines	do	do	1	do
19	do	Cistern	Stone	Stone	1	Brick
20	do	Cistern and oil store	do	do	2	Concrete
21	do	Cistern	do	do	1	Brick
a 22	do	Launch landing	Wood	Piles		
b 23	do	Pier	Wood	Piles		
	Y. and D.	Coal wharf (pier)	Wood	Piles		
	do	Books, maps				
	do	Models, drawings				
	do	Fire apparatus				
	do	Machinery and tools				
	do	Team				
	do	Vehicles				
	do	Furniture				
	do	Flags				
	do	Sea wall				
	do	Pavement				
	do	Sewers and drains				
	do	Yard wall				
	do	Floating pile driver				
	do	Water pipe				
	do	Distilling plant				
	do	Electric plant				
	do	Power plant				
	do	Coaling facilities				

TUTUILA.

d1	Y. and D	Magazine for powder	Concrete	Concrete	1	Iron
2	do	Barracks for native guards	do	do	1	do
e3	do	Station prison	Wood	Wood	1	do
f4	do	Dwelling	do	do	1	do
5	do	Coal sheds	Iron	Concrete	1	do
e6	do	Bonded storehouse	Wood	Wood	1	do
7	S. and A.	Storehouse	Iron	Concrete	1	do
8	Y. and D	Office building	Wood	do	1	do
g9	do	Hose house	do	do	1	do
h10	do	Ice house	do	Wood	1	do
i11	do	Dwelling	do	do	1	do
j12	M. and S.	Hospital	do	do	1	do
g	Y. and D	Civil engineer's office	do	do	1	do
		Wharf	Steel	Steel		

WASHINGTON, D. C.

A	Quarters	Commandant	Brick	Brick	2½	Slate
B	do	Superintendent gun factory	do	do	2½	do
C	do	Assistant inspector ordnance	do	do	3	Tin
D	do	do	do	do	3	do
E	do	General storekeeper	do	do	3	do
F	do	Officer in charge yards and docks	do	do	3	do

a Removed.
b Pier.

c Act of June 7, 1900.
d To be removed. Needs reroofing; walls good.

improvements, etc., at navy-yards and stations, June 30, 1902—Continued.

SAN JUAN, P. R.—Continued.

Dimensions of building.					Date of completion and original cost.		Present estimated value and condition.	
Length.	Width.	Height of eaves.	Superficial area.	Cubical contents.	Date.	Cost.	Value.	Condition.
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Sq. ft.</i>	<i>Cub. ft.</i>				
54 0	38 0	26 0	1,510	62,750	Unknown		\$2,100.00	Fair.
128 0	22 0	13 0	2,980	38,740	do		2,500.00	Good.
100 0	17 0	10 0	1,700	17,000	Unknown		100.00	Bad.
266 0	33 0	17 0	8,180	139,060	do		7,200.00	Poor.
16 0	10 0	12 0	160	2,080	1899	\$75.00	25.00	Fair.
34 0	17 0	20 0	710	14,200	Unknown		300.00	Good.
31 0	24 0	37 0	800	29,600	do		900.00	Do.
22 0	15 0	10 0	180	1,800	do		10.00	Do.
55 6	41 0		1,670		1899	572.00	200.00	Poor.
256 0	43 0		11,776		1902	14,894.57	14,500.00	Good.
							1,500.00	Do.
						240.00	180.00	Fair.
							1,600.00	Do.
						280.00	300.00	Good.
						565.88	450.00	Do.
						1,713.71	1,550.00	Fair.
							140.00	Do.
800 0						2,900.00	2,800.00	Good.
1,850 0			26,460				4,000.00	Fair.
550 0							900.00	Do.
45 0	25 0					1,341.50	3,000.00	Poor.
3,400 0							700.00	Fair.
							1,350.00	Good.
							2,000.00	Do.
							4,500.00	Do.
							200.00	Fair.
							2,500.00	Good.

TUTUILA.

75 0	25 0							Poor.
50 0	25 0							Good.
38 0	38 0				February, 1902			Fair.
150 0	100 0				do			Do.
50 0	30 0							Good.
50 0	30 0				February, 1902			Do.
40 0	40 0							Do.
10 0	6 0					\$282,261.45	\$282,261.45	Do.
12 0	10 0							Do.
40 0	40 0							Fair.
30 0	20 0							Poor.
15 0	15 0				February, 1902			Do.
								Good.

WASHINGTON, D. C.

42 0	26 0	20 0	3,297	105,942	1848.		\$10,000.00	Fair.
49 0	45 0	32 0						
77 6	22 0	18 6	2,891	73,570	1848.		6,000.00	Do.
28 0	20 0	22 0						
44 0	24 0	43 0	1,493	53,926	1879.	\$5,956.55	8,000.00	Do.
44 0	24 0	43 0	1,493	53,926	1879.	5,956.55	8,000.00	Do.
49 0	28 0	38 3	1,372	55,944	1880.		4,000.00	Do.
49 0	23 0	38 11	1,127	45,954	1880.		4,000.00	Do.

c Too small; insecure.
f Needs reflooring.

g Too small.
h New.

i Old and unstable.
j Too small; badly built.

No. 14.—Statement showing the character, value, and condition of

WASHINGTON, D. C.—Continued.

Yard number of building, bureau occupying, and for what purpose used.			Character of buildings.			
No.	Bureau.	Use.	Material.	Foundation.	No. of stories.	Kind of roof.
G	Quarters.....	Surgeon.....	Brick.....	Brick.....	3	Tin.....
H	do.....	Assistant inspector ordnance.....	do.....	do.....	2	do.....
^a K	do.....	do.....	do.....	do.....	3	do.....
^a L	do.....	Officer in charge seamen gunners.....	do.....	do.....		
^a M	do.....	Chemist.....	do.....	do.....		
^b N	do.....	Assistant inspector ordnance.....	do.....	do.....	2	Slate.....
^b O	do.....	do.....	do.....	do.....	2	do.....
^c R	do.....	Naval constructor.....	do.....	do.....	2 ^d	do.....
1	Y. and D. commandant pay office.....	Commandant's office.....	do.....	do.....	2	do.....
2	Marine corps.....	Marine barracks.....	do.....	Stone.....	3 ^d	Tin.....
^d 3	M. and S.....	Dispensary.....	do.....	Brick.....	2	do.....
4	Y. and D.....	Back buildings to quarters C and D.....	Brick and wood.....	Brick and posts.....	2	do.....
5	do.....	Sheds in rear of quarters E, F, and G.....	Wood.....	Posts.....	1	do.....
6	Ordnance.....	Museum.....	Brick.....	Brick.....	2	do.....
7	Y. and D.....	Ox stable.....	Stone.....	Stone.....	1	Shingle.....
8	do.....	Yard stable.....	Brick.....	do.....	1	Slate.....
10	do.....	Storehouse for track material.....	Wood.....	do.....		
14	Ordnance.....	Storehouse for ropes, etc., at brow.....	do.....	Brick.....	1	do.....
^f 15	do.....	Shell house (store No. 11).....	Brick.....	Stone on piles.....	1	Slate.....
^g 16	do.....	Assaying laboratory.....	do.....	do.....	1	Tin.....
^h 17	do.....	Chemical laboratory.....	do.....	do.....	1	do.....
21	do.....	Pattern storehouse (store No. 12).....	do.....	Stone.....	2	Slate.....
22	do.....	Foundry.....	do.....	do.....	1	do.....
23	do.....	do.....	do.....	do.....	1	do.....
^k 24	do.....	Locomotive house.....	do.....	Stone on piles.....	1	do.....
25	do.....	Buffing house.....	Wood.....	Brick.....	1	Tin.....
27	Y. and D.....	Yards and Docks paint shop.....	Brick.....	Concrete.....	1	do.....
28	Ordnance.....	Store No. 10.....	do.....	Stone on piles.....	1	do.....
29	Ordnance and Y. and D.....	Timber shed.....	Galvanized iron.....	Brick on concrete.....	1	Galvanized iron.....
30	Ordnance.....	Pattern shop (west wing).....	Brick.....	Stone on piles.....	2	Slate.....
31	Ordnance and Y. and D.....	Pattern shop (east wing).....	do.....	do.....	2	do.....
32	Ordnance.....	Erecting shop.....	do.....	Brick.....	1	do.....
33	do.....	West gun-carriage shop.....	do.....	do.....	1	do.....
35	do.....	South gun-carriage shop.....	do.....	do.....	1	do.....
36	do.....	East gun-carriage shop.....	do.....	do.....	1	do.....
37	do.....	Water-closets in square.....	do.....	Stone on piles.....	1	Tin.....
^{28a}	do.....	Boiler house for heating plant.....	do.....	do.....	1	Slate.....
39	Y. and D.....	Dynamo building.....	do.....	do.....	2	do.....
40	Ordnance.....	Annex to north gun shop.....	do.....	Concrete.....	1	Tin.....
41	do.....	North gun shop.....	do.....	do.....	1	Slate.....
42	do.....	South gun shop.....	do.....	Stone on piles.....	1	do.....
44	do.....	Ordnance office.....	do.....	Concrete.....	3	do.....
46	do.....	Cartridge-case shop.....	do.....	Stone.....	1	do.....

^a Built in 1868 as civil engineer's office; remodeled for quarters K, L, and M, act of Congress Mar. 3, 1891, at cost of \$10,000.

^b Built in 1866 as Yard and Docks paint shop; remodeled for quarters N and O, act. Mar. 3, 1891, cost, \$8,220.59.

^c Act Mar. 3, 1899.

^d Addition in 1901 at cost of \$2,685.74.

REPORT

OF THE

CHIEF OF THE BUREAU OF EQUIPMENT.

WASHINGTON, D. C., *October 1, 1902.*

SIR: I have the honor to submit a report of the operations of the Bureau of Equipment for the fiscal year ending June 30, 1902, with the annual estimates for funds for the service of the fiscal year ending June 30, 1904.

The appropriations under the cognizance of the Bureau and its various branches available for use during the fiscal year were as follows, viz:

Naval act, approved March 3, 1901.

Coal, equipment	\$2, 000, 000. 00
Equipment of vessels	1, 500, 000. 00
Depots for coal	750, 000. 00
Increase of the Navy, equipment	400, 000. 00
Ocean and lake surveys	100, 000. 00
Contingent equipment	35, 000. 00
Civil establishment	29, 802. 52
Naval Observatory, grounds and roads	10, 000. 00
Naval Observatory, purchase of land	149, 571. 08
Naval Observatory, Board of Visitors	2, 000. 00
Total	4, 976, 373. 60

Urgent deficiency act, approved February 14, 1902.

Coal, equipment	\$800, 000. 00
Equipment of vessels	450, 000. 00
Total	1, 250, 000. 00

Legislative, executive, and judicial act, approved March 3, 1901.

Salaries, Bureau of Equipment	\$12, 640. 00
Salaries, Naval Observatory	38, 140. 00
Contingent and miscellaneous expenses, Naval Observatory	16, 750. 00
Salaries, Nautical Almanac Office	22, 900. 00
Salaries, Hydrographic Office	100, 858. 00
Contingent and miscellaneous expenses, Hydrographic Office	39, 100. 00
Pilot charts, North Pacific Ocean	2, 000. 00
Total	232, 388. 00

SUMMARY.

Coal, equipment	\$2, 800, 000. 00
Equipment of vessels	1, 950, 000. 00
Depots for coal.....	750, 000. 00
Increase of the Navy, equipment.....	400, 000. 00
Ocean and lake surveys.....	100, 000. 00
Contingent equipment.....	35, 000. 00
Civil establishment.....	29, 802. 52
Naval Observatory	161, 571. 08
Salaries, Bureau of Equipment.....	12, 640. 00
Salaries, Naval Observatory.....	38, 140. 00
Contingent and miscellaneous expenses, Naval Observatory	16, 750. 00
Salaries, Nautical Almanac Office.....	22, 900. 00
Salaries, Hydrographic Office	100, 858. 00
Contingent and miscellaneous expenses, Hydrographic Office.....	39, 100. 00
Pilot charts, North Pacific Ocean.....	2, 000. 00
Total.....	6, 458, 761. 60

These appropriations were adequate for the needs of the service during the year, although, as stated, in the case of the appropriations "coal, equipment," and "equipment of vessels," an additional amount over that originally estimated for had to be provided, which was supplied in the urgent deficiency act, quoted above.

SUMMARY OF EQUIPMENT WORK AT NAVY-YARDS AND NAVAL STATIONS.

The following summary of work performed under this Bureau at the several navy-yards and naval stations during the fiscal year ending June 30, 1902, together with the cost of the same, is submitted. This does not include the cost of articles of equipage and supplies purchased and supplied to ships, including coal and water.

NAVY-YARD, PORTSMOUTH, N. H.

The total expenditures at this navy-yard during the fiscal year ending June 30, 1902, were as follows:

	Labor.	Material.	Total.
General maintenance:			
Office and store labor, handling coal, shipments, annual leave, etc.....	\$12, 524. 87	\$2, 671. 56	\$15, 196. 43
Repairs and additions to and maintenance of machinery plant	91. 48	5, 689. 23	5, 780. 71
Installation and repair of electrical appliances on board ships.....	9, 325. 49	16, 125. 28	25, 450. 77
Repairs to miscellaneous equipage on board ships.....	4, 100. 67	2, 182. 33	6, 283. 00
Manufacture and repair of—			
Canvas work	5, 748. 44	3, 870. 26	9, 618. 70
Rigging work	2, 104. 03	1, 351. 87	3, 455. 90
Electrical fittings	816. 85	745. 66	1, 562. 51
Miscellaneous articles.....	1, 352. 08	11, 935. 96	13, 288. 04
Total	36, 063. 91	44, 572. 15	480, 636. 06

as possible, but owing to the nondelivery of important tools and machinery the installation was considerably delayed. An addition to this shed has been approved, but not yet commenced. Much work has been accomplished since this plant has been in active operation, and it is hoped that the results for the ensuing year will be even more satisfactory.

Attention is invited to the great necessity for an increase in the clerical force of the equipment department at this navy-yard, which is at present composed of one clerk only.

NAVAL STATION, CAVITE, P. I.

The total expenditures at this naval station during the fiscal year ending June 30, 1902, were as follows:

	Labor.	Material.	Total.
General maintenance:			
Office and store labor, handling coal, shipments, etc	\$16,312.54	\$37,205.88	\$52,518.42
Repairs and additions to and installation of machinery plant.	3,783.15	12,257.85	16,041.00
Chattels, furniture, and fittings for equipment department ..	226.41	152.03	378.44
Maintenance of tugs, lighters, etc.....	3,928.33	15,415.63	19,343.96
Preparation for coal storage at Sangley Point.....	3,641.93	2,129.54	5,771.47
Breakwater for the protection of tugs and lighters in connection with handling coal.....	374.63	.....	374.63
Installation of and repairs to electrical appliances on board ship..	1,238.68	4,636.67	5,875.35
Repairs to miscellaneous equipage on board ship.....	2,971.38	769.71	3,741.09
Manufacture and repair of—			
Electrical supplies.....	3,560.59	1,414.91	4,975.50
Canvas work	12,824.58	18,623.57	31,448.15
Flags, curtains, etc.....	4,060.60	4,178.77	8,239.37
Rigging work.....	2,504.36	507.94	3,012.30
Miscellaneous articles.....	19.33	143.18	162.51
Total	55,446.51	97,435.68	151,882.19

REPAIRS TO SHIPS AND SHIP EQUIPMENT.

Ajax, collier.—Supplied parts for dynamo engine. Complete.

Albay, gunboat.—Supplied complete equipment outfit. Complete.

Annapolis, gunboat.—Supplied awnings and dynamo engine. Complete.

Arayat, gunboat.—Supplied new awnings and numerous articles of equipment. Complete.

Arethusa, water transport.—Supplied miscellaneous articles of equipment. Complete.

Basco, gunboat.—Supplied awnings and miscellaneous equipment. Complete. •

Brooklyn, armored cruiser.—Supplied various articles of equipment. Complete.

Cæsar, collier.—Repaired galley. Complete.

Calamianes, gunboat.—Supplied entire equipment outfit. Complete.

Callao, gunboat.—Entire outfit under repair and renewal. Incomplete.

Celtic, refrigerator ship.—Supplied awnings and miscellaneous equipment. Complete.

Don Juan de Austria, gunboat.—Repaired dynamo engine and supplied numerous items of equipment. Complete.

El Cano, gunboat.—Original outfit in preparation. Incomplete.

Frolic, gunboat.—Supplied sails, awnings, and numerous articles of equipment. Complete.

Gardoqui, gunboat.—Entire outfit being overhauled and renewed. Incomplete.

General Alava, gunboat.—Installed additional electric lights and supplied numerous articles of equipment. Complete.

Glacier, refrigerator ship.—Supplied sails, awnings, and numerous articles of equipment. Complete.

Helena, gunboat.—Supplied awnings, flags, coaling screens, and articles of rigging. Complete.

Iris, distilling ship.—Supplied awnings, sails, flags, tarpaulins, and miscellaneous equipment. Incomplete.

Isla de Cuba, gunboat.—Supplied awnings, sails, covers, flags, and miscellaneous equipment. Complete.

Isla de Luzon, gunboat.—Supplied awnings and miscellaneous equipment and repaired dynamo engine. Complete.

Justin, collier.—Supplied awnings, flags, and miscellaneous equipment. Complete.

Kentucky, battleship.—Supplied awnings, boat outfits, coaling bags, flags, and other items of equipment. Complete.

Leyte, gunboat.—Entire outfit being thoroughly overhauled and renewed. Incomplete.

Manila, gunboat.—Supplied awnings and miscellaneous equipment. Complete.

Mariveles, gunboat.—Supplied awnings, boat outfits, flags, and miscellaneous equipment. Complete.

Mindanao, gunboat.—Entire outfit being generally overhauled and renewed. Incomplete.

Mindoro, gunboat.—Entire outfit being overhauled and renewed. Incomplete.

Monadnock, monitor.—Supplied flags. Complete.

Monocacy, gunboat.—Supplied table linen. Complete.

Monterey, monitor.—Supplied awnings, boat outfits, other articles of canvas equipment, flags, and miscellaneous equipment. Complete.

New Orleans, cruiser.—Supplied table linen, flags, boat outfits, and articles of canvas and miscellaneous equipment. Complete.

New York, armored cruiser.—Supplied awnings, boat outfits, and articles of canvas and miscellaneous equipment. Complete.

Oregon, battleship.—Supplied flags. Complete.

Pampanga, gunboat.—Supplied awnings, flags, and miscellaneous equipment. Complete.

Panay, gunboat.—Supplied awnings and other canvas outfit; repaired galley and miscellaneous equipment. Complete.

Paragua, gunboat.—Supplied flags and miscellaneous equipment. Complete.

Piscataqua, tug.—Supplied awnings, flags, boat outfits, sails, and miscellaneous articles of equipment. Complete.

Pompey, collier.—Supplied awnings, tarpaulins, flags, and miscellaneous articles. Complete.

Princeton, gunboat.—Supplied awnings, coaling bags, and other canvas equipment; also, flags, spare parts for ranges, and miscellaneous articles. Complete.

Quiros, gunboat.—Entire outfit thoroughly overhauled and call bells installed. Complete.

Rainbow, water transport.—Supplied flags, dispatch bags, and other articles of equipment. Complete.

Samar, gunboat.—Supplied an entire outfit. Complete.

Saturn, collier.—Supplied awnings, boat outfits, flags, and miscellaneous equipment. Complete.

Urdaneta, gunboat.—Supplied flags, cushions, and clothes bags. Complete.

Vicksburg, gunboat.—Supplied numerous articles of canvas equipment and repaired dynamo engine. Complete.

Villalobos, gunboat.—Supplied sails, flags, spare parts for range and miscellaneous articles of equipment. Complete.

Wilmington, gunboat.—Supplied coffee urn, flags, articles of canvas equipment and miscellaneous articles. Incomplete.

Wompatuck, tug.—Supplied awnings, flags, and miscellaneous equipment. Complete.

Yorktown, gunboat.—Supplied awnings, flags, and articles of miscellaneous equipment. Complete.

Zafiro, transport.—Supplied awnings, boat outfits, flags, table linen, and miscellaneous articles. Complete.

FLAG ROOM.

The sum of \$8,239.37 was expended for labor and material in the flag room during the year. Flags, cushions, curtains, etc., are made here, but the space available for the manufacture of these articles is so limited that it has only been practicable to keep pace with current demands without being able to accumulate any stock for general issue.

During the past year, owing to the difficulty in procuring first-class flag makers, the employment of native women has been authorized in this department, to a limited extent, and they have proved entirely satisfactory.

SAIL LOFT.

The work in the sail loft has considerably increased during the year, and the demand for canvas has been such that the capacity of the loft was taxed to its greatest extent. When the new equipment building is complete the facilities for this work will be materially increased. The sum of \$31,448.15 was expended for labor and material in this department.

RIGGING LOFT.

The sum of \$3,012.40 was expended during the year for the repair and preparation of rigging outfits for ships.

FACILITIES FOR EQUIPMENT WORK.

The electrical repair shop has been in active operation during the year, and many articles of equipment have been manufactured and repaired. The increase in electrical work on this station has been such as to demonstrate the need of a complete workshop for this purpose. •

The equipment building mentioned in the last annual report is still incomplete, but it is hoped that it will be finished during the present year. The use of this building will materially improve the facilities for equipment work, but they will continue to be entirely inadequate for the requirements of the department until more room is provided for the expansion of the navy-yard.

A very large amount of work has been accomplished at this station during the past year, considering the limited space and facilities which are available for this purpose in the equipment department.

NAVAL STATION, SAN JUAN, P. R.

There are no facilities for equipment work at this station except for the storage of coal and handling the same. San Juan is becoming an important coal depot for ships of moderate size, and is at present frequently visited. The storage of coal has been restricted until recently, owing to the small area of the station, but by an Executive order this area has lately been increased, land formerly under the control of other departments of the government having been transferred to the Navy.

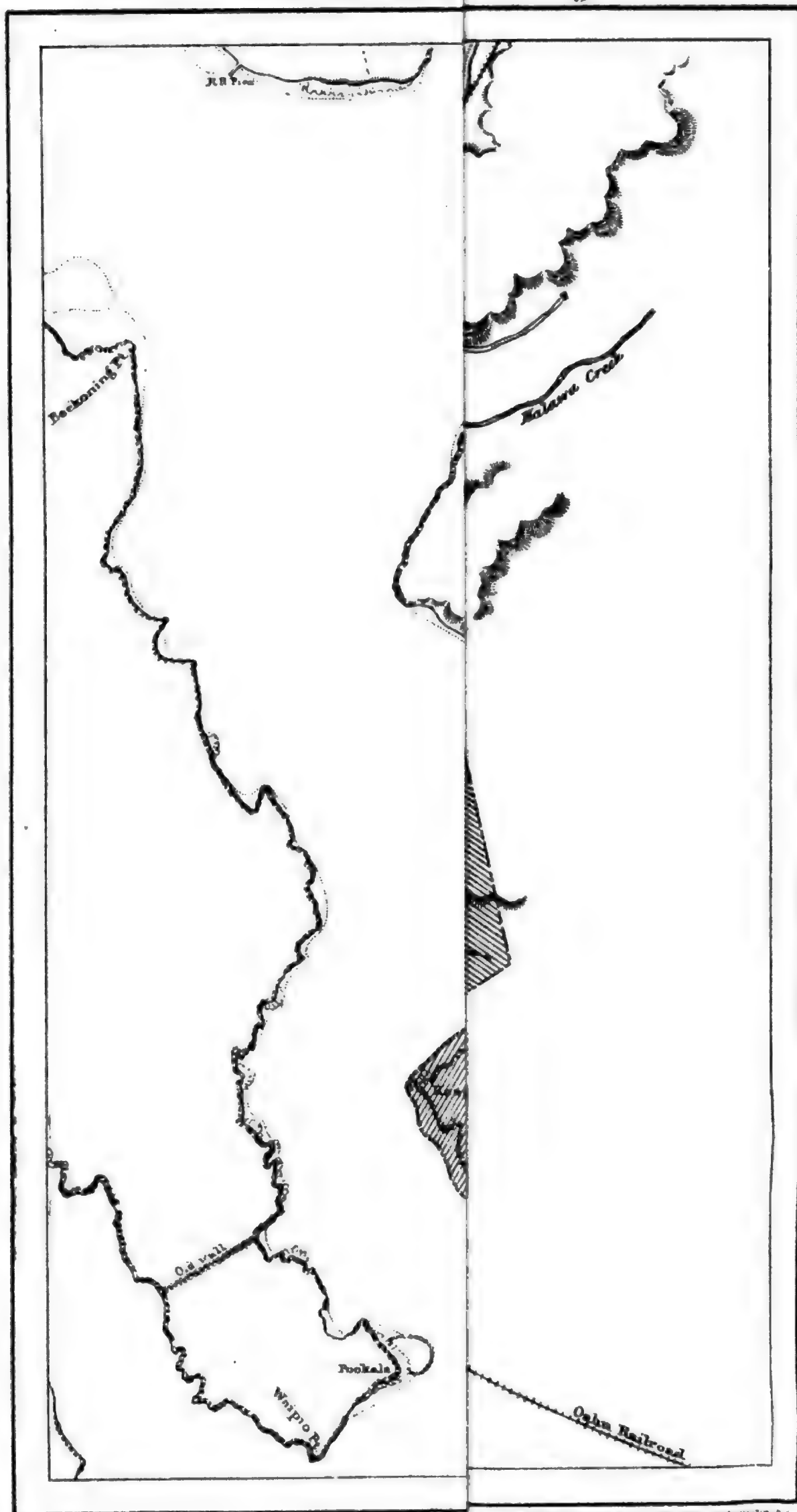
NAVAL STATION, HAWAII, H. T.

There are no facilities for equipment work at this station other than for the storage and supply of coal and fresh water. As stated in the last annual report, it is of great importance as a coal depot.

The act of Congress approved March 3, 1901, making appropriations for the naval service for the fiscal year ending June 30, 1902, contained the following clause under the Bureau of Equipment, viz:

DEPOTS FOR COAL: To enable the Secretary of the Navy to execute the provisions of section fifteen hundred and fifty-two of the Revised Statutes, authorizing the Secretary of the Navy to establish, at such places as he may deem necessary, suitable

Parcels of Proceedings



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depots for coal and other fuel, for the supply of steam ships of war, six hundred thousand dollars; and to enable him to acquire land for a naval station and harbor and channel defense at Pearl Harbor, Hawaii, one hundred and fifty thousand dollars; in all, eight hundred and fifty thousand dollars.

In accordance with this act the Bureau, under the direction of the Department, has made the following progress toward acquiring land at Pearl Harbor, Hawaii, for a naval station and harbor and channel defense.

Reference is made to the accompanying chart of a portion of Pearl Harbor in the neighborhood of Southeast Loch.

The site selected for a naval station is shown on this chart by hashed lines; the greater portion is on the mainland. Kuahua Island and the southeastern part of Ford Island are included. The entire site, not including that portion in use by the Oahu Railroad Company, amounting to 0.646 acres, is about 719 acres.

The acquisition of this land was complicated by certain leaseholds, mortgages, claims for indirect damages, etc.

As the owners in fee refused to name what was considered a reasonable price for the land selected, condemnation proceedings under the Hawaiian law of eminent domain were instituted July 6, 1901. Subsequent to this date all of the land in question was considered condemned for government purposes.

Referring again to the chart. Kuahua Island and the site selected on the mainland, except that portion occupied by the Oahu Railroad, were owned by the Bishop Estate; the railroad property was owned by the Oahu Railroad and Land Company; and Ford Island by the John Ii Estate. These lands were leased as follows:

Ford Island by the Oahu Sugar Company; the Bishop Estate, except Kuahua Island and small portions of land between the railroad and Southeast Loch, by the Honolulu Plantation Company and the James I. Dowsett Company. The portion leased to each is clearly indicated on the chart.

At the request of the Navy Department the Attorney-General instructed the United States district attorney at Honolulu, Hon. J. J. Dunne, to represent the Government in the condemnation proceedings.

The Government, at the present time, owns in fee the entire site selected. With the exception of that portion leased to the Honolulu Plantation Company, the site is free of incumbrance.

The following sums of money out of the appropriation have been paid:

To the Bishop Estate, for 693.47 acres of land	\$52,737.50
To the John Ii Estate for 25.83 acres of land	3,000.00
To the James I. Dowsett Estate, for leasehold on 48.88 acres of land belonging to the Bishop Estate	2,400.00
To W. G. Irwin, for interest on Ford Island by reason of mortgage	2.00
To Oahu Sugar Company, for leasehold on Ford Island	1.00
Total	58,140.50

There have been other minor expenses in connection with condemnation suits, making abstracts of titles, recording deeds and resolutions, witness fees, etc., probably within \$500.

The property belonging to the Oahu Railroad and Land Company was deeded to the United States in consideration of a perpetual right of way granted by the latter at some point over Government land.

The question of the value of the Honolulu Plantation Company's leasehold is now, by appeal, before the United States circuit court of appeals at San Francisco.

The United States district attorney at Honolulu, Hon. J. J. Dunne, and Rear-Admiral J. F. Merry, U. S. Navy (retired), commandant of the naval station, Hawaii, are entitled to commendation for the zeal and ability displayed in conducting condemnation proceedings and guarding the interests of the Government.

The bar at the entrance of Pearl Harbor is being dredged under the supervision of the War Department. The channel leading from the bar to Pearl Harbor is tortuous and at present unsafe for the navigation of large ships, although the depth of water is ample. The Bureau recommends that Congress be asked for an appropriation for the improvement of this channel for naval purposes.

NAVAL STATION, TUTUILA, SAMOA.

There are no facilities for equipment work at this station. The coaling station proper constructed under this Bureau has been completed and stocked with coal. Ample supplies of the latter and fresh water can be obtained at any time.

ISLAND OF GUAM, LADRONES.

There are no facilities for equipment work at this island nor public works of any kind necessary for naval purposes.

The improvements recommended by the commission appointed by the Department, in accordance with an act of Congress, to make this harbor useful to the Navy have not been commenced.

EXTRACTS FROM YEARLY REPORTS OF INSPECTORS OF EQUIPMENT AT SHIPBUILDING WORKS.

BATH IRON WORKS, BATH, ME.

[Lieut. A. Rust, U. S. Navy, inspector.]

Bagley, Barney, and Biddle, torpedo boats.—These vessels were practically finished before the commencement of the past fiscal year, and have all been turned over to the Government.

Cleveland, protected cruiser.—Keel laid June 1, 1900; launched September 28, 1901. The electrical appliances coming under the cognizance of this Bureau are being supplied by the General Electric Company. Installation of conduit for light and power circuits, 60 per cent completed; interior communication work being installed by Charles Cory & Son, 75 per cent completed. Estimated time of completion of the work under cognizance of the Bureau, June 1, 1903. The hull of the *Cleveland* is 83 per cent completed.

Nevada, monitor.—Launched November 24, 1900. The electrical appliances coming under the cognizance of the Bureau are being supplied by the General Electric Company. Generators and main switch-

EQUIPMENT EXPENSES ABROAD.

There was expended during the fiscal year, under the direction of commanders in chief of fleets and commanders of ships, the sum of \$225,000 for supplies and services for equipment purposes, not including the amount expended for coal. This amount is approximate only, full returns not having been received.

COAL.

A total of 382,040 tons of coal, costing \$2,220,211.09, at an average of \$5.81 per ton, was purchased during the fiscal year.

The following table indicates the amount of coal purchased for steaming purposes since 1892 and the cost thereof:

Fiscal year ending June 30—	Quantity.	Total cost.	Average cost per ton.
	<i>Tons.</i>		
1892.....	73,467	\$550,451.35	\$7.49
1893.....	67,054	449,065.27	6.69
1894.....	94,336	640,355.96	6.78
1895.....	98,615	527,590.25	5.35
1896.....	116,903	620,131.38	5.30
1897.....	138,318	655,921.72	4.75
1898.....	452,551	2,122,005.28	4.68
1899.....	281,169	1,679,510.55	5.97
1900.....	228,395	1,572,652.97	6.88
1901.....	324,108	2,273,111.81	7.01
1902.....	382,040	2,220,211.09	5.81

DOMESTIC COAL.

Of the total amount purchased—viz, 382,040 tons—293,438 tons, costing, with the transportation thereof, the sum of \$1,543,869.35, at an average of \$5.26 per ton, were purchased within the limits of the United States.

The following table indicates the amount of coal purchased within the United States for steaming purposes since 1892, and the cost thereof:

Fiscal year ending June 30—	Quantity.	Total cost.	Average cost per ton.
	<i>Tons.</i>		
1892.....	38,450	\$221,918.66	\$5.77
1893.....	33,257	147,999.04	4.45
1894.....	42,190	178,163.58	4.22
1895.....	50,630	181,985.89	3.59
1896.....	55,162	196,795.40	3.57
1897.....	82,051	280,091.09	3.41
1898.....	378,437	1,520,119.75	4.02
1899.....	195,216	1,238,355.40	6.34
1900.....	141,921	834,527.34	5.88
1901.....	219,042	1,379,433.51	6.30
1902.....	293,438	1,543,869.35	5.26

FOREIGN COAL.

The balance of the 382,040 tons—viz, 88,602 tons—were purchased by paymasters of ships, mostly abroad, costing the sum of \$676,341.74, at an average of \$7.63 per ton.

The following table indicates the amount of coal purchased by ships for steaming purposes since 1892, with the cost thereof:

Fiscal year ending June 30—	Quantity.	Total cost.	Average cost per ton.
	<i>Tons.</i>		
1892.....	35,017	\$298,948.55	\$8.53
1893.....	38,797	301,066.23	8.91
1894.....	52,146	462,192.38	8.86
1895.....	47,985	336,183.47	7.00
1896.....	61,741	423,335.98	6.85
1897.....	56,268	375,840.63	6.68
1898.....	74,111	601,885.53	8.12
1899.....	85,958	441,155.15	5.13
1900.....	86,476	738,125.63	8.53½
1901.....	105,066	893,677.81	8.50
1902.....	88,602	676,341.74	7.63

The amount of coal used during the fiscal year was nearly 18 per cent greater than during the preceding year; it was 67 per cent greater than during the fiscal year ending June 30, 1900. It will be seen by the foregoing table that the amount of coal used in the Navy for steaming purposes has increased more than five times during the past ten years.

The cost of coal during the fiscal year was \$1.20 or 20 per cent less per ton than during the preceding fiscal year.

The average cost of coal purchased in the United States during the fiscal year was \$1.04 per ton less than during the preceding year.

The average cost of coal purchased by ships during the fiscal year was 87 cents per ton less than during the preceding year. The chief reasons for the above-mentioned reductions were due to a decreased cost of Welsh coal at Cardiff, Wales, and very low freights. During the last half of the fiscal year coal freights reached an unprecedentedly low figure. While they have since advanced a certain amount, they are still much below normal rates.

As stated in the last annual report of the Bureau, the price of the best coal mined in the United States was advanced on the 1st of April, 1900, more than 50 per cent of its former price. Since that time it has not been advanced, and at present, generally speaking, the Navy is being supplied with the best coal obtainable at about \$2.50 per ton f. o. b. at the tidewater outlets of the mine.

The varying prices of coal shown in the foregoing table, which, for the most part, include the cost of transportation, are due not only to the fluctuating cost of coal itself at the point of shipment and the fluctuating cost of transportation, but to the locality where purchased. For instance, ships on our own coast and in the West Indies can be supplied with coal at very reasonable rates; but in the Pacific, where good coal is scarce and brought a very long distance, and in the Orient, the cost is twice or three times that in the above-mentioned localities.

Ships must go wherever their presence is required, which can not be foreseen when preparing estimates, nor can the ever-varying cost of coal or freight be foreseen.

It is gratifying to report that while the total amount of coal consumed by the Navy during the fiscal year was increased 18 per cent the amount of foreign coal purchased was decreased 16 per cent and the amount of domestic coal increased 34 per cent.

The following table indicates the price of the best Welsh coal f. o. b. at Cardiff, Wales, from May, 1899, to date:

Prices of best Cardiff coal at Cardiff, Wales.

Date.	Price per ton.		Date.	Price per ton.	
1899.			1901.		
May.....	\$3.12 to	\$3.24	January.....	\$4.80 to	\$5.04
June.....		3.12	February.....	4.44	4.56
July.....	3.12	3.18	March.....	4.32	4.44
August.....	3.12	3.24	April.....	4.20	4.32
September.....	3.12	3.24	May.....	5.04	5.28
October.....	3.18	3.36	June.....	4.56	4.68
November.....	3.30	3.42	July.....	5.04	5.16
December.....	4.80	5.04	August.....	5.04	5.16
1900.			September.....	4.80	4.92
January.....	6.48	7.20	October.....	4.32	4.38
February.....	5.76	6.00	November.....	4.08	4.32
March.....	5.40	5.76	December.....	4.20	4.32
April.....	5.04	5.52	1902.		
May.....	5.28	5.64	January.....	4.14	4.26
June.....	5.28	5.52	February.....	3.78	3.90
July.....	5.28	5.52	March.....	3.60	3.72
August.....	5.76	6.00	April.....	3.66	3.78
September.....	6.48	6.96	May.....	3.96	4.08
October.....	6.12	6.48	June.....	3.90	4.02
November.....	4.92	5.16	July.....	4.08	4.14
December.....	4.44	4.68	August.....	3.84	3.90
			September.....	3.96	4.02

CONSUMPTION OF COAL.

Of the total amount of coal used in the ships of the Navy, 35,458 tons were consumed on board of colliers, torpedo boats, tugs, etc., from which no reports are made of the specific object of expenditure.

Of the balance, 52 per cent was consumed for steaming purposes; 45 per cent for distilling, pumping, heating, ventilating, and lighting; 2 per cent for cooking purposes; and 1 per cent for steam launches.

Especial attention is invited to the large amount of coal used in ships for auxiliary purposes, viz, 48 per cent of the entire consumption.

TRANSPORTATION OF COAL.

The Bureau has continued the policy of supplying the best domestic coal obtainable for use on shipboard. This policy necessitates the transportation of coal to many ports of the world, where it can not be obtained at reasonable rates.

During the past fiscal year a total of 153,000 tons of coal were shipped to various foreign and domestic ports, the greater amount having been sent to the Asiatic Station. Of this amount 84,000 tons were sent in chartered vessels, mostly foreign, and 69,000 tons in navy colliers.

The following table will indicate the fluctuating rates of freight on coal from the Atlantic coast to the port of Manila:

Fiscal year.	Average rate per ton.	Fiscal year.	Average rate per ton.
1899	\$6.99	1901	\$8.63
1900	7.90	1902	5.83

The freight on coal from the Atlantic coast to the Pacific ports remains at a high figure. Cardiff coal can be purchased at San Francisco, duty paid, for considerably less than coal can be shipped from the Atlantic coast. The average price of Admiralty Cardiff delivered at San Francisco during the past fiscal year was \$7.83 per ton; during the preceding year it was \$9.29 per ton. The average price paid for the best Admiralty Cardiff delivered at Honolulu during the fiscal year was \$8.57 per ton; during the preceding year, \$9.87 per ton. But few American vessels are offered for coal freight, although it is gratifying to note that the number for coastwise and West Indian ports is increasing.

TRANSPORTATION OF COAL BY NAVY COLLIERIES.

There are thirteen navy colliers in commission, manned by merchant crews, as follows:

<i>Ajax.</i>	<i>Hannibal.</i>	<i>Justin.</i>
<i>Alexander.</i>	<i>Leonidas.</i>	<i>Nanshan.</i>
<i>Brutus.</i>	<i>Sterling.</i>	<i>Pompey.</i>
<i>Cæsar.</i>	<i>Lebanon.</i>	
<i>Nero.</i>	<i>Saturn.</i>	

The *Saturn*, *Justin*, *Nanshan*, and *Pompey* are attached to the Asiatic Squadron. At present the *Justin* is used as a station ship at Guam; she will, however, soon be relieved by the *Supply*. In the opinion of the Bureau the *Nanshan* and *Pompey* are sufficient for the distribution of coal from Manila, where a large amount is kept in stock. The small coal depots throughout the Philippine Islands are now well stocked.

It is recommended that the *Saturn* be sent to the Mare Island Navy-Yard and held for service on the Pacific; also that the *Justin*, when relieved by the *Supply*, be sent to the same place.

The *Hannibal*, *Leonidas*, *Sterling*, and *Lebanon* are used to stock coal depots on the Atlantic and Gulf coasts and in the West Indies; also to supply the fleet at points where no depots exist. When used for the latter purpose they perform the important function of exercising the crews of battle ships and cruisers in supplying coal to their ships under war conditions.

The *Ajax*, *Alexander*, *Brutus*, *Cæsar*, and *Nero* are used for the transportation of coal to the Pacific and Orient.

The Bureau again calls attention to previous recommendations advising the construction of two large steam colliers capable of carrying 10,000 tons of coal as cargo and 1,000 tons in bunkers, with accommodations for a naval personnel and liberal amount of stores, and a

secondary battery. Such ships would be very useful in time of peace or war. They should be capable of making 12 knots when fully loaded and be economical in making long passages at a speed of 8 or 9 knots. Your attention is invited to the statement in the last annual report of the Bureau on this subject.

COAL TESTS.

Tests of coal have been continued during the year, as in past years. Evaporative or boiler tests are made at the New York and Mare Island navy-yards, on all samples of 12 tons each, delivered free of cost to the Government.

A chemical analysis is made at the Washington Navy-Yard on all samples of not less than 4 pounds delivered to the Bureau free of cost.

Exhaustive tests were made during the early part of the year by the torpedo-boat flotilla at Norfolk on Georges Creek coal, from the Consolidation Coal Company, Baltimore, Md.; Pocahontas coal, from Castner, Curran & Bullitt, Norfolk, Va., and New River coal, from the Chesapeake and Ohio agency at Newport News, Va., in order to determine, if possible, which kind was best adapted for the use of torpedo boats. The result showed little difference when the coal was carefully selected in the three varieties.

The following tables contain the result of the chemical analyses of the various samples received. The samples are arranged in the order of the amount of fixed carbon they contain:

Chemical analysis of samples of coal at the Washington Navy-Yard, Washington, D. C.

[Arranged in order of percentage of fixed carbon. Sample selected officially is noted by an asterisk *.]

BITUMINOUS COALS.

Commercial name.	Location of mines.	Fixed carbon.	Volatile matter.				Sulphur.	Increase in weight at 250° F.
			Com-bustible.	Non-com-bustible.	Moisture.	Ash.		
Powhatan	Iryona, Clearfield County, Pa.	86.670	1.060	1.380	3.130	7.590	0.331	1.110
Canmore*	575 miles east of Vancouver, British Columbia.	86.367	9.716	.370	.730	2.676	.141	.....
PenrikyberSmokeless Steam	County of Glamorgan, Wales.	85.960	9.540	1.250	.390	2.660	.020	.261
Albion Cardiff*	Glamorganshire, Wales..	85.169	8.646	2.240	.570	3.237	.138	.....
Ledyob .....	.....	84.700	.....	.500	1.880	12.920	.278	None.
Canmore*	575 miles east of Vancouver, British Columbia.	84.610	9.930	1.380	.590	3.290	.200	.....
Bonanza	Bonanza, Ark.....	84.520	10.100	1.980	1.060	2.340	.221	.240
Tug River	McDowell County, W. Va.	82.780	12.400	1.060	.980	2.780	.042	.323
Albion Cardiff*	Glamorganshire, Wales..	82.446	12.397	1.598	.352	3.147	.060	.....
Old Victor .....	.....	82.207	14.320	.830	.300	2.210	.133	.....
Coal Creek*	Coal Creek, Tenn.....	82.140	2.530	.830	1.500	13.000	.254	.133
Georges Creek Big Vein Cumberland	Allegheny County, Md ..	81.953	11.070	1.580	.290	3.060	.077	.....
Hartford	Sebastian County, Ark...	81.680	13.670	2.770	.530	1.330	.830	.040
Albion Cardiff*	Wales, England.....	81.490	15.010	.890	.750	1.860	.067	.180
Bonanza	Bonanza, Ark.....	80.740	14.590	.760	.840	2.870	.421	.212
Elk Garden Big Vein Cumberland	Mineral County, W. Va..	80.668	11.681	.630	.480	6.451	.090	.....
Bonanza	Bonanza, Sebastian County, Ark	80.610	14.100	1.250	.630	3.410	.365	.....

Chemical analysis of samples of coal at the Washington Navy-Yard, Washington, D. C.—Continued.

BITUMINOUS COALS—Continued.

Commercial name.	Location of mines.	Fixed carbon.	Volatile matter.		Moisture.	Ash.	Sulphur.	Increase in weight at 250° F.
			Combustible.	Non-combustible.				
Lloydell.....	Lloydell, Cambria County, Pa.	80.590	12.500	1.950	1.240	3.720	0.108	0.201
Pocahontas*.....	McDowell County, W. Va.	80.580	12.340	.720	1.300	5.060	.129	.417
Tug River*.....	do.	80.540	15.180	.970	.910	2.400	.088	.261
Argyle*.....	Dunlo, Cambria County, Pa.	80.493	10.678	2.930	1.400	4.078	.421	.....
Pocahontas*.....	.....	80.390	12.840	1.070	1.530	4.170	.276	.109
Lloydell.....	Lloydell, Cambria County, Pa.	80.370	14.680	.635	.925	3.390	.098	.084
Eureka 12.....	.....	80.318	14.280	.910	.200	4.090	.292	.....
Rockhill.....	Robertsdale, Huntington County, Pa.	80.280	13.380	.860	2.067	3.420	.623	.....
Pocahontas*.....	Virginia and West Virginia, Tazewell and McDowell counties.	80.103	13.593	.590	.430	5.147	.137	.....
Durham.....	Durham, Lookout Mountain, Georgia.	80.068	14.594	1.930	.310	2.922	.176	.....
Tug River*.....	McDowell County, W. Va.	80.040	14.170	1.090	.930	3.770	.213	.364
Argyle*.....	Dunlo, Cambria County, Pa.	79.977	11.408	1.811	.899	5.068	.837	.....
Pocahontas*.....	.....	79.890	12.600	.740	2.390	4.380	.255	.008
Pocahontas*.....	.....	79.830	13.430	1.490	.640	4.610	1.300	.....
Powelton.....	.....	79.820	12.560	.....	1.460	6.160	.014	.118
Pocahontas*.....	.....	79.780	12.520	.600	1.720	5.380	.285	.160
Cameron.....	Cameron, Ind. T.....	79.760	4.740	.310	9.730	5.460	.213	.067
Loyal Hanna.....	Westmoreland County, Pa.	79.677	12.107	1.740	.850	4.797	.829	.....
Sonman.....	Stony Creek Mine, Hooversdale, Somerset County, Pa.	79.497	12.619	1.849	.721	5.089	.225	.....
New River.....	Fayette County, W. Va., near Thurmond.	79.470	18.000	.570	.630	1.330	.188	.291
Miller Vein*.....	Cumberland County, Pa.	79.384	10.951	2.107	1.333	5.251	.974	.....
Tug River*.....	.....	79.350	14.090	1.110	.910	4.540	.693	.300
Elk Garden Big Vein Cumberland.	.....	79.310	12.800	1.170	1.000	5.720	.338	.555
Atlantic No. 1.....	.....	79.300	16.850	1.520	.250	1.920	.160	.....
Pocahontas.....	.....	79.260	15.240	.590	.790	4.120	.081	.566
Acme Smokeless..	Pennsylvania.....	79.174	9.050	.903	.557	9.690	.606	.....
Fairview.....	Somerset County, Pa.....	79.162	10.427	1.170	1.180	7.597	.464	.....
Yellow Run.....	.....	79.078	14.140	1.660	.401	4.619	.102	.....
Listie Smokeless Steam.	Listie, Somerset County, Pa.	79.050	13.760	.810	1.310	5.070	.236	.262
Pocahontas*.....	Virginia and West Virginia, Tazewell and McDowell counties.	78.980	13.650	.583	1.337	5.250	.200	.....
Tug River*.....	.....	78.940	16.020	.780	.930	3.330	.370	.501
Davis Steam.....	Mineral County, W. Va..	78.900	11.540	.760	.910	7.890	1.010	None.
Elk Garden Big Vein Cumberland.	.....	78.850	13.040	.610	.960	6.540	.386	.558
Macdonald Colliery.*	Fayette County, W. Va..	78.790	17.230	1.020	.840	2.120	.199	.260
Pocahontas*.....	Majestic Mine.....	78.750	14.260	1.790	.040	5.160	.603	.085
Russellville.....	Russellville, Ark.....	78.640	11.020	.830	1.010	8.500	.108	.324
Spartan.....	Rendville, Fayette County, W. Va.	78.510	17.440	1.420	1.320	1.310	.066	.251
Albion Cardiff*....	Wales, England.....	78.480	16.760	.930	.640	3.190	.062	.121
Pocahontas*.....	McDowell County, W. Va.	78.480	13.150	.780	1.220	6.370	.092	.364
Georges Creek Big Vein Cumberland.*	Allegheny County, Md..	78.328	14.856	1.490	.510	4.576	.240	.....
Argyle.....	Dunlo, Cambria County, Pa.	78.193	15.277	.803	.697	4.756	.274	.....
Elk Garden Big Vein Cumberland.	Mineral County, W. Va..	78.145	15.115	.978	1.062	4.406	.294	.....
Georges Creek Big Vein Cumberland.	Allegheny County, Md..	78.088	12.850	1.230	.500	6.830	.502	.....
Elk Horn.....	Lewis County, Wash.....	77.953	1.036	1.940	1.310	17.526	.235	.....
Davis Steaming.....	.....	77.950	15.010	.950	.870	5.220	.463	.358
Prairie Creek or Huntington.	Huntington, Ark.....	77.830	14.030	1.180	1.330	5.630	1.330	.357

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Chemical analysis of samples of coal at the Washington Navy-Yard, Washington, D. C.—
Continued.

BITUMINOUS COALS—Continued.

Commercial name.	Location of mines.	Fixed carbon.	Volatile matter.		Moisture.	Ash.	Sulphur.	Increase in weight at 250° F.
			Combustible.	Non-combustible.				
Cripple Creek	Briceville, Anderson County, Tenn.	63.420	30.040	1.430	1.770	3.340	0.427	0.314
Battleship	Coal creek, Tenn.	63.150	29.780	1.809	2.351	2.651	.199	.....
Pocahontas (Washington).	Palmer, King County, Wash.	63.070	27.060	1.100	1.770	7.010	.165	.417
Black Diamond ..	Coal creek, Tenn.	63.036	30.409	2.138	.572	3.618	.227	.....
Pittsburg (mine No. 1).	Pittsburg Consolidated Coal Co., McDonald Station, Washington County, Pa.	63.010	30.120	1.550	2.590	2.750	.172	.300
Toms Creek *	Wise County, Va.	62.890	29.210	2.730	1.320	3.850	.021	.550
Blue Canyon *	Blue Canyon Coal Co., Whatcom County, Wash.	62.744	29.649	1.830	1.790	3.679	.308	.....
Fraterville	Coal creek Coal Mines, Tenn.	62.720	31.470	1.290	1.080	3.440	.299	.790
Flemington	Flemington, W. Va.	62.720	31.750	.890	.670	3.970	1.400	.609
Battleship	Black Diamond mine	62.680	31.950	1.290	2.050	2.030	.248	.752
Kaiping No. 5 Lump.*	Kaiping, 50 miles north-east from Tientsin, China.	62.420	30.080	2.420	.970	4.110	.026	.166
Shawmut (mine No. 1).	Horton Township, Elk County, Pa.	62.400	29.450	1.240	1.710	5.200	1.760	.534
Fairhaven	Skagit County, Wash.	62.395	20.175	2.090	.310	14.885	.145	.....
Burnwood Colliery	Near Newcastle, New South Wales.	62.270	29.400	.720	1.120	5.490	.097	.701
Youghiogeny (Ocean mine No. 1).	Fayette County, Pa.	62.260	26.760	1.200	1.580	8.200	.022	.318
Gravity Creek	Near Westport, New Zealand.	62.230	32.700	1.290	1.010	2.770	.453	.113
Hetton *	Bullock Island, opposite Newcastle, New South Wales, Australia.	62.193	30.466	1.317	2.143	3.569	.753	.....
Mingo	Claiborne County, Tenn.	62.088	27.966	2.581	.959	4.666	1.740	.....
Pinesville	Pinesville, Ky.	62.070	33.590	1.310	1.940	1.090	.129	.603
Gamble	Alabama.	61.960	24.670	.900	1.880	10.590	.435	.423
Shawmut (mine No. 2).	Horton Township, Elk County, Pa.	61.920	27.000	1.400	1.140	8.540	1.960	.340
Kaiping	Kaiping, 50 miles north-east from Tientsin, China.	61.920	22.890	1.250	.660	13.280	.594	.301
Jellico *	Campbell County, Tenn., and Wheatley County, Ky.	61.868	31.559	3.710	.690	1.859	.314	.....
Westport *	Beulah River, Buller County, Nelson Province, South Island, New Zealand.	61.798	34.929	1.020	1.630	.199	.424	.....
Shawmut (mine No. 3).	Horton township, Elk County, Pa.	61.670	32.060	1.000	1.680	3.590	.278	.702
Pardee *	Patton, Cambria County, Pa.	61.664	28.845	3.399	2.282	3.484	.326	.....
Philippi *	Meriden, W. Va.	61.480	25.100	1.200	1.490	10.730	1.480	.390
Paint Rock	Oneida, Tenn.	61.440	28.110	2.940	2.110	5.400	.185	1.120
A. & A. Co.	Near Newcastle, New South Wales.	61.390	31.470	.970	2.080	4.090	.288	.725
New Chum * .....	.....	61.380	29.190	1.080	1.930	6.420	.160	.431
Kaiping	Kaiping, 50 miles north-east Tientsin.	61.280	27.290	1.220	.580	9.630	.210	.294
Black Diamond * ..	Coal creek, Tenn., Black Diamond Coal Co.	61.191	31.985	1.291	.539	4.695	.299	.....
Swanbank *	Pinkerba, Queensland, Australia.	61.220	24.220	2.000	1.880	10.680	.194	.661
Los Cerrillos	Santa Fe, N. Mex.	61.180	26.500	3.870	1.430	7.020	.223	.439
Hetton	Bullock Island, opposite Newcastle, New South Wales, Australia.	61.051	30.481	1.917	1.883	4.492	.176	.....
Laurel County	Pittsburg, Laurel County, Ky.	61.000	31.500	2.590	2.050	2.860	1.120	1.070
Killingworth	Near Newcastle, New South Wales.	60.570	31.620	1.020	2.460	4.330	.192	.618
Wallsend	do.....	60.393	28.731	2.160	2.540	6.001	.175	.....
Denniston	Near Westport, New Zealand.	60.420	34.210	1.500	1.760	2.110	.396	.553

Chemical analysis of samples of coal at the Washington Navy-Yard, Washington, D. C.—Continued.

BITUMINOUS COALS—Continued.

Commercial name.	Location of mines.	Fixed carbon.	Volatile matter.		Moisture.	Ash.	Sulphur.	Increase in weight at 250° F.
			Com-bustible.	Non-com-bustible.				
Guanta*.....	Naricual, near Guanta, Venezuela.	60.240	35.410	0.780	1.490	2.080	0.824	0.382
Stockton	Near Newcastle, New South Wales.	60.170	33.800	.920	1.980	3.040	.115	.456
Wickhan and Bullock Island.	do.....	60.170	29.640	1.070	2.250	6.870	.252	.418
New Swanbank*..	Brisbane River, Queensland, Australia.	60.150	26.380	1.020	3.630	8.820	.337	1.180
Hetton	Bullock Island, opposite Newcastle, New South Wales, Australia.	60.040	32.990	1.350	1.820	3.800	.167	1.230
Fairhaven.....	Skagit County, Wash	59.980	33.030	2.000	2.980	2.010	.202	.867
Sneddon.....	New South Wales.....	59.960	34.680	.730	1.980	2.650	.034	.319
Dudley	Near Newcastle, New South Wales.	59.850	32.010	.850	2.100	6.190	.144	.820
Lambton	do.....	59.790	28.540	1.060	2.570	8.040	.223	.974
Burke's or Bogside*	Pinkenba, Queensland ..	59.550	24.980	2.150	1.940	11.380	.450	.489
Cape Breton*.....	Reserve mines, Cape Breton.	59.520	30.132	2.139	2.781	4.262	1.166	.....
Kanawha	Kanawha County, W. Va., near Charleston.	59.350	30.930	2.650	2.150	4.920	.007	.....
Waratha.....	Near Newcastle, New South Wales.	59.230	31.990	1.070	1.920	5.790	.071	.530
Corona	Corona, Walker County, Ala.	59.170	30.930	2.320	.720	6.090	.770	.....
Wallarrah*	Northumberland County, New South Wales.	59.080	30.620	.770	1.940	7.590	.104	.375
Cooperative	Plattsburg, New South Wales.	58.940	25.400	1.170	2.410	12.080	1.330	.605
Killingworth.....	West Wallsend, New South Wales.	58.890	30.860	1.070	2.360	6.820	.124	.443
Lota*	Lota, Chile.....	58.760	32.620	1.870	3.900	2.850	3.400	.....
Sunnyside.....	Sunnyside, Utah.....	58.750	34.620	2.040	2.400	2.190	.627	.455
Duckenfield*	Australia.....	58.680	29.220	1.340	2.710	8.050	.274	.564
Carrington	Near Newcastle, New South Wales.	58.570	32.780	1.320	1.650	5.680	.222	.754
Duckenfield.....	.....	58.530	31.290	.950	2.300	6.930	.116	.977
American Cardiff..	.....	58.450	31.650	.900	1.850	7.150	1.630	.308
Comox*.....	Union, Vancouver Island, British Columbia.	58.400	22.717	1.605	.745	15.867	.666	.....
Zunbunna.....	Victoria Colliery, 73 miles from Melbourne.	58.320	25.240	1.650	4.380	10.410	.200	.715
Wear Lump	Pittsburg, Crawford County, Kans.	58.230	29.600	2.960	.730	8.480	4.880	.656
Outtrim	Outtrim, Victoria, 76 miles from Melbourne.	58.210	31.130	1.250	4.390	5.020	.071	.739
Manchester.....	Altamont, Ky.....	58.160	35.500	1.470	2.610	2.260	.461	1.050
Philippi*.....	Meriden, W. Va	58.090	22.430	1.320	1.510	16.650	1.980	.212
Coal Valley	Coal Valley, near Birmingham, Ala.	58.084	28.968	3.190	1.220	8.218	1.220	.....
Whitwood*.....	Bundanba, 18 miles from Brisbane River, Queensland, Australia.	58.020	27.730	.920	3.710	9.620	.535	.795
Lambton Colliery ..	New South Wales.....	57.910	23.990	.960	2.520	14.620	.892	.521
Sunnyside*.....	Utah	57.890	34.590	2.530	2.310	2.680	.637	.678
Duckenfield.....	Brown's Colliery, near Newcastle, New South Wales.	57.870	30.160	1.020	2.290	8.660	.220	.751
Northern Extended.	Near Newcastle, New South Wales.	57.750	30.000	1.180	2.520	8.550	.187	.158
Franklin	Near Seattle, Wash.....	57.580	33.860	1.500	3.260	3.800	.097	1.610
Newcastle Wallsend.	Northumberland County, New South Wales.	57.550	33.170	.470	2.390	6.420	.154	.677
Monongahela Gas Coal.	First Pool Mine, Monongahela Gas Coal Co., Willack Station, Allegheny County, Pa.	57.500	32.880	.890	1.060	7.670	2.880	.406
Australian.....	Stewart, Kightley, New South Wales.	57.350	35.030	1.310	2.100	4.210	.240	.231
Cooperative	Wallsend, Newcastle, New South Wales.	57.350	30.480	1.020	2.480	8.670	4.530	.344
McAlester	Alderson, Ind. T.....	57.340	32.380	.980	2.300	7.000	.201	1.502
Hetton	Carrington, New South Wales.	57.290	29.000	.810	2.450	10.450	.823	.400

Chemical analysis of samples of coal at the Washington Navy-Yard, Washington, D. C.—
Continued.

ANTHRACITE COALS.

Commercial name.	Location of mines.	Volatile matter.			Mois- ture.	Ash.	Sul- phur.	In- crease in weight at 250° F.
		Fixed carbon	Com- busti- ble.	Non- com- busti- ble.				
Mahanoy Schuyl- kill, colliery No. 2	Schuylkill County, Pa. ...	94.630	2.154	0.141	0.309	2.633	0.133	.....
Morea Middle Le- high.	Lehigh County, Pa.	93.990	1.114	.191	.779	3.793	.133	.....
Do.....	do.....	90.227	1.540	.401	.439	7.190	.203	.....
Kohonoor, colliery No. 1.	Schuylkill County, Pa. ...	87.966	1.863	.650	2.690	6.694	.137	.....
Mahanoy Schuyl- kill, colliery No. 2.	do.....	86.854	.901	.651	2.919	8.491	.184	.....
Shenandoah Schuylkill.	do.....	85.250	1.060	.290	.501	11.810	1.080	.....
Wyoming Mine....	Wyoming Mine, Pa.	85.185	7.128	.000	.470	6.778	.439	.....
Bryn Blaen.....	Glamorganshire, Wales ..	84.600	7.400	.650	1.300	6.050	.198	0.409
Otto Mine.....	Pennsylvania.....	84.575	4.859	.349	.451	9.538	.228	.....
Lykens Valley.....	Dauphin County, Pa.....	84.343	5.192	.371	.309	9.622	.163	.....
Wilkesbarre.....	Wilkesbarre, Pa.....	83.971	3.668	.560	2.910	8.637	.254	.....
Kaska William.....	.....	83.441	.614	.570	2.960	12.294	.121	.....
Lackawanna.....	Lackawanna County, Pa.	81.716	6.793	1.357	1.773	8.012	.349	.....
Natalie.....	Shamokin district, Schuylkill County, Pa., Buck Mountain vein.	79.236	11.134	.057	.423	9.023	.127	.....
Glyn Neath.....	Glyn Neath, Glamor- ganshire, Wales.	78.328	14.250	.690	2.700	4.576	.240	.....
Wilkesbarre.....	Wilkesbarre, Pa.....	77.122	1.611	.959	4.401	15.331	.576	.....
Chimbote.....	Near Chimbote, Peru	71.560	None.	10.440	10.370	7.630	.370	None.

ARRANGEMENTS FOR SUPPLYING COAL TO NAVAL SHIPS
IN FOREIGN PORTS.

The Bureau has made agreements in sixty-one foreign ports to supply ships of the Navy with coal at below current rates. This method, inaugurated three years ago, has proved not only convenient but economical, and is generally adopted for all large navies of the world.

COAL AND WATER BARGES.

Extended reference was made in the last annual report of the Bureau to the necessity of providing ample coal and water barges for use at various naval and coaling stations, in order to insure supplying ships rapidly with coal and water. The first coal barge acquired for naval use was in February, 1898; at present there are, built and building, a total of 69 coal barges and 8 water barges.

NAVAL COAL DEPOTS.

The Bureau in its annual report for 1899 fully discussed all previous efforts of the Department to establish depots for supplying coal to our ships of war. By consulting this report it will be seen that these efforts were meager and the results small.

The great importance of the subject was forced upon the attention of the Department by the Spanish war. Since that event progress has been fair and appropriations liberal. The great need of deposits of

coal for naval use wherever the presence of ships may be necessary is becoming more and more apparent every year and is due to the increase of the Navy and the expansion of the country.

It may be expected that the demand for naval coal depots will be greater in the future; in the opinion of the Bureau this demand has only just begun. It is impossible at present to state definitely, with the changing politics of the world, what the needs of the future may be. Our needs at present, however, are sufficient to require the greatest efforts the Department can put forth in this direction.

An additional reason for always having large supplies of coal in store has been forced upon the attention of the Bureau during the past year, viz: The interruption in the flow of supplies by reason of strikes. The fleet narrowly escaped being left without coal last summer on this account. What has occurred in the past may be expected to occur in the future. Should there be a general strike of bituminous coal miners, or employees of railroads carrying coal to tide water, or in transportation lines generally, the ships of the Navy would at present be helpless. The Bureau knows of no way of overcoming this danger except by carrying large stocks of coal on hand. It appears appropriate, in this connection, to state that the French Government carries a stock of 200,000 tons of coal at Toulon and the Government of Great Britain nearly if not quite this amount at Malta.

The annual reports of the Bureau in the past have fully set forth the progress that has been made in establishing depots for coal. The present seems to be an opportune time to fully state the reasons that have influenced the Bureau in locating the depots that have been completed, those under construction, and those projected.

NAVAL COAL DEPOTS ON THE ATLANTIC AND GULF COASTS.

A chart is appended showing the location of coal depots for naval purposes on the coast of the North Atlantic Ocean and the Gulf of Mexico.

FRENCHMAN BAY, MAINE.—This coal depot, described in the last annual report of the Bureau, has been completed in accordance with the original contract and partially stocked with coal. Certain additions to the depot not included in the original contract—viz, a concrete covering for the steel piles and an ice breaker—are in process of construction. In February, 1902, a contract was awarded to the Penn Bridge Company, of Beaver Falls, Pa., the lowest bidders, for the installation of a complete water-supply system for the use of the depot and for supplying ships, including a steel standpipe of 250,000 gallons capacity. With these additions and a number of lighters also under construction, the depot will be thoroughly equipped for furnishing ample supplies of coal and water and handling coal at the rate of about 200 tons per hour. The capacity for storage is about 10,000 tons. This storage capacity may be increased with comparatively little expense; an indefinite amount can always be stored in the open. In the opinion of the Bureau, its capacity should be increased to 20,000 tons.

Frenchman Bay was not the site on the coast of Maine originally selected by the Bureau. It was recommended, however, by a board of

zance of the Bureau of Yards and Docks, on a coal-storage plant located at the navy-yard with a maximum capacity of 20,000 tons of coal. The Bureau has frequently called attention to the fact that there is no good coal obtainable on the Pacific Coast, and that it is necessary to transport it about 15,000 miles by water. Under these circumstances, it will be readily understood that if the country is to be reasonably well prepared for emergencies a large storage of the best quality of coal must be constantly on hand, not only at Puget Sound, but elsewhere on the Pacific coast.

NAVAL STATION, MARE ISLAND, CAL.—The coal sheds at the Mare Island Navy-Yard, originally designed for a capacity of about 7,500 tons, have been completed during the past year. Foundations have been prepared for an additional storage which will make the total capacity about 20,000 tons. It is hoped that the facilities at Mare Island may be gradually increased so that 25,000 tons of coal can be stored under cover. At present there is one Brown conveyor for handling coal; it is necessary that another should be installed. An appropriation is available for this purpose.

SAN FRANCISCO BAY, CALIFORNIA.—A full account of the efforts of this Bureau to establish an adequate naval coal depot in San Francisco Bay will be found in its annual reports for the past three years. There has been no change in the status of Mission Rock since the Bureau's last annual report, the question of title thereto having been in the supreme court without action in the meantime. The Bureau has prepared preliminary plans for a coal depot on Mission Rock and is ready to push the work as soon as the question of title is settled.

It is much to be regretted that a place so important as San Francisco Bay can not be provided with a large stock of coal for naval purposes without delay. At present, oil is very largely used for fuel on this coast; this and a poor quality of coal are the only fuels found west of the Rocky Mountains. Most of the fuel used for industrial purposes, previous to the advent of oil, outside of that mined on the Pacific coast, has been brought from Australia and New Zealand. While better than Pacific coast coal, it is not sufficiently good for ships of war. Only the best coal mined on the Atlantic coast and Welsh coal are suitable for naval purposes in the Pacific. It is therefore self-evident that a large storage capacity is necessary in this bay in order that the Navy may be assured at all times of an adequate supply.

Mission Rock was recommended as a site for a large naval coal depot by a board of which Capt. Louis Kempff, U. S. Navy, was president. The board was convened by order of the Department June 16, 1898, and sent in its report on July 13, 1898. A copy will be found in Appendix VI.

SAN DIEGO, CAL.—Reference is made to the last annual report of the Bureau for a statement concerning the advisability of locating a naval coal depot in this harbor. Also an account of the transfer of land from the War Department to the Navy Department by Executive order for this purpose. Recently the Bureau discovered that Congress had, in the sundry civil bill, transferred 6½ acres of the most valuable portion of this same land to the Treasury Department as a site for a marine hospital. This matter is at present being considered by the two departments.

The Bureau in the meantime has prepared complete plans and specifications for a naval coal depot at this port. The plans contemplate a pier of steel construction, with cylindrical concrete supports, carrying an elevated pocket with a capacity of about 3,000 tons; two loading towers; a pier approach similar to the main pier in construction, carrying a steel trestle; and a storage and handling plant on shore with a maximum capacity of 25,000 tons.

The construction of a coal depot at this port has been contemplated by the Department for some time. On June 19, 1902, the Bureau requested authority to advertise for bids for a coal-storage plant in accordance with the designs above mentioned. Copies of the correspondence on the subject will be found in Appendix V.

INSULAR NAVAL COAL DEPOTS.

A chart is appended showing the location of naval coal depots, completed, building, or proposed, on the insular possessions of the United States.

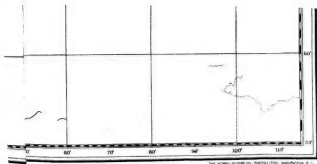
NAVAL STATION, SAN JUAN, P. R.—This continues to be a very useful coal depot and supplies coal and water to a large number of ships of the Navy, particularly during the winter months. The storage of coal in the past has been circumscribed, owing to the small space available for the purpose. Recently, by Executive order, the area of the naval station has been much enlarged, and the Bureau has, therefore, been enabled to increase the amount of coal in stock. All coal is stored in the open without cover. A small wooden pier affords means of coaling one ship at a time; the coal is transported in baskets, and, owing to the large population available for such work, ships are coaled very rapidly. The accommodations for water supply should be improved. The Bureau supplies coal to all other bureaus of the Department at this station and to the War Department.

There are two completed coal lighters for use at this depot, and two more are under construction. This will enable more than one ship to be coaled at the same time.

It should be borne in mind that San Juan can only be used by ships of small and medium size, large ships being prevented from entering the harbor by reason of shoal water. It is therefore much to be regretted that the United States possesses no other coal depot in the West Indies.

NAVAL STATION, HAWAII, H. T.—The coal depot at Honolulu has been fully described in the former annual reports of the Bureau. It has recently been much improved by grading the grounds, planting shade trees, etc. The artesian well affords an abundance of water for irrigating purposes. The storage capacity has been increased to 30,000 tons. The piers are much used by army transports and merchant ships. As it will be some years before a naval station is established in Pearl Harbor, the depot at Honolulu should be kept in good condition. The land, buildings, slips, and piers are now very valuable.

The Bureau has supplied large amounts of coal in the past from this depot to army transports, and also to other departments of the government. On the occasion of a coal famine at Honolulu several mail steamers were supplied with coal that would otherwise have been obliged to lay up; also sugar plantations where the cane crop would otherwise have been ruined.



The wavy line is a wavy line, not a straight line.

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The value of this coal depot will soon be much enhanced by cable connection with the Pacific coast.

The Bureau has reason to believe that the great utility of Honolulu as a coal depot during the Spanish war largely influenced Congress in its decision to annex the Hawaiian Islands.

NAVAL STATION, TUTUILA, SAMOA.—A steel coal shed of 5,000 tons capacity and a steel pier, both of modern construction and excellent design, which have been under construction at this naval station during the past three years, and referred to in the annual reports of the Bureau, have been completed, and the depot is now stocked with coal.

As Tutuila has advanced from a naval coal depot to a naval station, public works there are now under the cognizance of the Bureau of Yards and Docks. That Bureau has an appropriation for extending the capacity of the coal depot and has already secured land for the purpose. The extension will include better appliances for handling coal rapidly than now exist. In the opinion of the Bureau the capacity of this depot should not be less than 25,000 tons.

The port of Pago Pago, where the above-mentioned naval station is located, is the most valuable in the South Pacific Ocean, and should be fortified. It is already a port of call for the line of steamers between Australia and San Francisco, and is rapidly increasing in importance.

It should be borne in mind that the authority of the Department for establishing a naval coal depot at this port is the act of Congress approved March 2, 1889, as follows:

For the purpose of permanently establishing a station for coal and other supplies for the naval and commercial marine of the United States, on the shores of the bay of the harbor of Pago Pago, on the island of Tutuila, Samoa, for the erection of the necessary buildings and structures thereon and for such other purposes as may, in the judgment of the President, be necessary to confirm the rights of the United States under article second of the treaty of eighteen hundred and seventy-eight, between the United States and the King of the Samoan Islands, and the deed of transfer made in accordance therewith, the sum of \$100,000.

The establishment of a coal depot at the island of Tutuila was further approved by the Department and the naval war board during the Spanish war.

NAVAL STATION, GUAM.—Since the acquisition of the island of Guam at the conclusion of the Spanish war the Bureau has set forth in its annual reports in detail the great value of the island as a port of call for coal and other supplies for ships en route between the Pacific coast and the Philippine Islands. In the last annual report of the Bureau reference was made to a commission which, under a law of Congress, visited this island and, after a most careful and detailed survey, made recommendations and estimates for the improvement of the port of San Louis d'Apra, the harbor of Guam, both for naval and commercial purposes. The report of this mixed commission, composed of navy and army officers, was published and copies supplied to the Naval and Commerce Committees of Congress. An appropriation of \$150,000 for the improvement of this harbor passed the Senate, first, in the river and harbor bill, and, second, upon the nonconcurrence of the House, in the naval bill; as the House nonconcurred in the latter the result was nil. It is evident that much interest is taken in this port by the upper House of Congress, and it is only a matter of time when appropriations will be granted for its improvement.

The sum of \$40,000, asked for by this Bureau for the acquisition of land, was granted by Congress. On August 9, 1902, the Bureau requested your authority to purchase the land desired and to commence work on the construction of a naval coal depot. To this end it is first desired to dredge a channel into a natural basin in order to secure the necessary protection from violent storms.

All coal used at this station, for whatsoever purpose, is supplied by this Bureau. In the opinion of the Bureau a storage capacity of 25,000 tons should eventually be secured with adequate means for handling rapidly. With the completion of a transisthmian canal this will undoubtedly become an important mercantile port of call.

The retention of Guam as an American possession after its capture, as provided for in the peace protocol at the close of the Spanish war, was for the express purpose of establishing a naval coal depot.

NAVAL STATION, CAVITE, P. I.—Considerable space has been devoted in former reports of the Bureau to the question of supplying and storing an adequate supply of coal for the Asiatic Squadron in the Philippine Islands. The situation at present is, briefly, as follows:

A contract has been awarded during the past year to the Atlantic, Gulf and Pacific Company, of New York and San Francisco, for the erection of a modern substantial coal depot at Sangley Point, near the Cavite Naval Station.

In general terms this contract provides for the construction of the following:

A steel coaling pier, with cylindrical cast-iron supports, filled with concrete, which in turn are supported on wooden piles, 408 feet long and 75 feet wide.

An elevated steel coal pocket of a capacity of about 3,000 tons, located on the pier, so arranged that coal may be discharged by gravity into ships and lighters with great rapidity.

Two coal sheds of steel and concrete construction, each 192 by 144 feet. These sheds will be constructed with overhead automatic railway tracks in monitors for filling purposes, and with elevated concrete floors through which coal will be discharged into cars by means of numerous valves for supplying ships and lighters.

Handling machinery, consisting of two steel discharging and loading towers, operated by steam and running on tracks along the pier, and 12 automatic railways for filling the sheds. In addition, 34 surface tracks for use in transporting coal from the sheds to the pocket on the pier or to ships and lighters.

A pumping plant with elevated tanks, for fire purposes.

A straight channel, 500 feet wide on the bottom and of a uniform depth of 20 feet at low water, to be dredged from deep water to a point 100 feet beyond the coal pier.

The contract provides that the depot shall be completed by August, 1903. It will have a capacity for storing under cover about 30,000 tons of coal. It is intended to provide for storing a large additional amount in the open.

In addition to the naval coal depot at Cavite, Manila Bay, the following subdepots have been established in the archipelago:

Polloc, Mindanao.
Port Isabela, Basilan.
Port Cebu, Cebu.
Iloilo, Panay.

Olongapo, Luzon.
Sual, Luzon.
Port Salomague, Luzon.

The first four are of considerable importance and are being greatly improved. All are supplied with coal from Manila by the fleet colliers. Additional subdepots, particularly on the east side of the archipelago and near the Straits of San Bernardino, will probably be required in the near future.

The Bureau supplies all of the coal used by other bureaus at the naval station, Cavite.

Reference is made to Appendix VII for interesting reports in connection with the establishment of a naval coal depot at Manila.

FOREIGN NAVAL COAL DEPOTS.

The establishment of naval coal depots in foreign waters involves diplomatic considerations of the highest order and, manifestly, should not be discussed in a report of a public character.

FRESH WATER FOR STEAMING PURPOSES.

There were purchased and distilled during the year a total of 39,849,936 gallons of water for use of ships of the Navy, costing the sum of \$32,049, an average of \$0.804 per 1,000 gallons.

Of this quantity 30,585,137 gallons, costing the sum of \$11,368.36, an average of \$0.371 per 1,000 gallons, were purchased or distilled at navy-yards or stations; 9,264,799 gallons, costing the sum of \$20,680.78, an average of \$2.23 per 1,000 gallons, were purchased by paymasters of ships as follows:

Ship.	Gallons.	Cost.	Ship.	Gallons.	Cost.
Ajax.....	50,250	\$121.10	Marietta.....	80,000	\$432.12
Alert.....	4,000	20.00	Michigan.....	500,000	500.00
Alexander.....	52,564	606.29	Mindora.....	2,000	7.57
Alliance.....	16,080	85.95	Mohican.....	15,000	45.60
Alvarado.....	7,000	7.00	Monadnock.....	550,500	317.87
Arayat.....	2,950	3.76	Monongahela.....	108,940	612.59
Arcthusa.....	983,000	572.23	Monterey.....	55,250	86.30
Atlanta.....	63,276	218.86	Nanshan.....	33,000	18.19
Bennington.....	20,750	29.06	Nashville.....	286,025	928.62
Brooklyn.....	1,083,500	2,148.72	New Orleans.....	157,000	213.64
Buffalo.....	367,975	1,373.40	New York.....	122,550	85.41
Cesar.....	82,410	115.65	Olympia.....	70,000	140.00
Calamianes.....	4,500	2.36	Pensacola.....	315,695	105.58
Castine.....	103,250	377.51	Petrel.....	6,500	13.50
Celtic.....	271,550	412.55	Philadelphia.....	138,622	1,210.57
Chicago.....	257,220	892.58	Pompey.....	12,000	9.56
Concord.....	62,624	390.62	Potomac.....	3,000	10.95
Culgoa.....	117,500	349.90	Prairie.....	580,703	957.85
Dixie.....	129,000	291.50	Princeton.....	100,525	67.83
Dolphin.....	17,500	58.75	Quiros.....	2,000	.79
Don Juan de Austria.....	33,625	20.29	Rainbow.....	17,500	59.62
Dupont.....	2,000	5.00	Ranger.....	3,500	31.23
Eagle.....	62,800	113.04	Samar.....	5,000	8.04
Essex.....	33,125	160.94	San Francisco.....	156,625	1,040.57
Frolic.....	5,834	7.95	Saturn.....	65,700	37.67
General Alaya.....	57,250	125.22	Topeka.....	15,000	11.50
Glacier.....	186,752	340.64	Vicksburg.....	285,200	528.85
Hartford.....	17,500	59.50	Vigilant.....	8,220	2.19
Helena.....	244,813	404.08	Vixen.....	27,100	50.22
Iowa.....	139,200	1,159.27	Wheeling.....	20,931	149.91
Isla de Cuba.....	178,825	240.20	Wisconsin.....	297,626	1,997.13
Kearsarge.....	72,000	144.00	Wilmington.....	179,250	151.32
Kentucky.....	97,000	97.02	Winslow.....	2,300	55.00
Machias.....	3,680	18.40	Yorktown.....	167,750	109.67
Manila.....	91,284	112.16	Zafiro.....	33,750	15.42

The following table will show the cost per year of water for steaming purposes since 1899:

Fiscal year ending June 30—

1899	\$60,879.88
1900	34,340.25
1901	32,264.21
1902	32,049.14

PILOTAGE.

There was expended during the year for pilotage for cruising ships the sum of \$28,893.12, as follows:

Ajax	\$104.60	Machias	\$46.00
Alabama	627.82	Marietta	154.63
Albany	274.25	Mariveles	25.14
Alexander	351.89	Massachusetts	152.80
Alliance	39.26	Mayflower	68.40
Alvarado	205.43	Mohican	148.00
Annapolis	24.00	Monadnock	517.21
Arayat	28.00	Monocacy	257.62
Brooklyn	198.31	Monterey	1,556.09
Brutus	390.90	Nanshan	174.98
Buffalo	1,458.79	Nashville	212.37
Cæsar	34.14	New Orleans	321.23
Castine	27.01	New York	509.29
Celtic	987.07	Olympia	842.87
Chicago	507.52	Pampanga	30.00
Cincinnati	500.00	Panther	347.25
Columbia	227.24	Paragua	89.50
Culgoa	9.73	Philadelphia	175.22
Dixie	517.15	Pompey	273.07
Dolphin	175.75	Potomac	59.00
Don Juan de Austria	211.18	Prairie	204.75
Essex	49.64	Quiros	8.74
Frolic	100.68	Rainbow	433.81
General Alava	125.91	Samar	12.50
Glacier	935.60	San Francisco	116.24
Hartford	935.31	Saturn	236.93
Helena	2,677.55	Solace	298.63
Illinois	1,495.50	Sylph	10.00
Indiana	703.41	Topeka	432.00
Isla de Luzon	438.58	Vicksburg	79.80
Kearsarge	1,318.27	Villalobos	277.99
Kentucky	1,136.25	Vixen	63.00
Lancaster	1,495.65	Wheeling	1,181.06
Leonidas	48.00	Yankton	173.75
Leyte	12.99	Zafiro	66.18

The following table indicates the amount expended for pilotage each year since 1896:

Fiscal year ending June 30—

1896	\$21,615.82
1897	26,688.58
1898	30,786.43
1899	31,610.21
1900	26,491.08
1901	23,511.64
1902	28,893.12

TOWAGE.

There was expended during the year for towage of ships of war the sum of \$3,380.62.

LIBRARIES.

The sum of \$23,000 was expended during the year in the purchase of new books for issue to ships; total number of books distributed, including Government publications, about 16,000.

The number of books issued to a ship depends upon its complement of officers and men. Ships' libraries are supplied with general reference books, dictionaries, encyclopedias, naval and military histories, works on engineering, electricity, natural sciences, sociology, military and international law, diplomacy, histories, and biographies.

The crews' libraries comprise selections from naval and military history, mechanics, travels, adventures, biographies, and a carefully selected assortment of standard and modern fiction. The list of books available for issue is undergoing constant change with a view to the elimination of all works which can be replaced by others of greater merit.

The libraries for all ships are assembled at the New York or Mare Island navy-yards, and all purchases of books are made at New York. This work is under the direction of the equipment officers at the above-mentioned yards, and its scope is rapidly increasing in proportion to the growth of the Navy.

The following table indicates the libraries assembled at the New York Navy-Yard during the past year:

Ship.	Ships' library.	Crews' library.	Ship.	Ships' library.	Crews' library.
Olympia.....	750	350	Des Moines.....	450	300
Cincinnati.....	350	250	Galveston.....	450	300
Montgomery.....	450	200	Supply.....	500	300
Prairie.....	450	300	Bennington.....	350	250
Rainbow.....	550	200	Santee.....		300
Cavite Station.....	425	400	Adams.....	450	250
San Francisco.....	600	350	Detroit.....	450	200
Panther.....	350	300	Raleigh.....	400	250
Arkansas.....	280	200	Chicago.....		125
Florida.....	280	200	Rainbow.....	100	
Nevada.....	280	200	Helena.....		150
Wyoming.....	280	200	Bancroft.....	250	200
Chattanooga.....	450	300	Mayflower.....	100	75
Denver.....	450	300			

TRANS-PACIFIC SUBMARINE TELEGRAPH CABLE.

The construction of a Government trans-Pacific submarine telegraph cable has not been authorized by Congress, as appeared probable immediately after the close of the Spanish war. The discussions on the subject in both the Senate and House have indicated, however, a strong sentiment in favor of a cable either owned or controlled by the Government. In the opinion of the Bureau, the bill authorizing a Government cable was only defeated upon the understanding by the majority

of both houses that the Commercial Pacific Cable Company would lay and operate a cable to the satisfaction of the Government. The Government requirements have been specified by the President, but so far as this Bureau is aware the Commercial Pacific Cable Company has not signified any intention of following them. From apparently reliable statements, the company has made great progress in the manufacture of the necessary amount of cable. Previous to the adjournment of Congress the officers of the company expressed a great desire to obtain the Pacific cable surveys made by the Department. Since Congress has adjourned, however, no application has been received for this information.

The Bureau further observes that no statements have apparently been given out concerning the route which is to be followed by the company. A site has been acquired for landing the cable near Honolulu, but, so far as the Bureau is informed, no steps have been taken to prepare relay stations at other points on American territory considered necessary by the Department.

OCEAN AND LAKE SURVEYS.

The following naval ships were engaged exclusively during the fiscal year in making marine hydrographic surveys:

The U. S. S. *Yankton*, Commander A. M. Knight, U. S. Navy, commanding, made a reconnaissance of the south coast of the island of Cuba, from Cape San Antonio to the neighborhood of Santiago de Cuba, with the object of securing data for the recharting of the existing imperfect surveys of the south coast of the island. The geographical positions of the principal points of the region referred to were determined. In addition, special hydrographic examinations were made at a number of important places and safe anchorages located and surveyed. The results of the work of this vessel have proved conclusively that the coast features of this island have, up to the present time, been inaccurately charted to such an extent as to make a thorough examination of the remainder of the Cuban coast line an absolute necessity.

The U. S. S. *Vixen*, Commander C. G. Calkins, U. S. Navy, commanding, was engaged on a continuation of the marine survey of the northwestern coast of Cuba, from Cape San Antonio to the eastward, commenced by the U. S. S. *Eagle* during the preceding year. In addition a reconnaissance was made of the harbor of Bahia Honda. Excellent progress was made in the work, which was arduous at all times and occasionally involved exposure to danger from bad weather and uncharted obstructions.

The U. S. S. *Eagle*, Lieut. Commander S. W. B. Diehl, U. S. Navy, commanding, made a careful and detailed survey of the two most important ports of the island of Cuba, viz, Cienfuegos and Habana.

The U. S. S. *Ranger*, Commander W. L. Field, U. S. Navy, and Commander W. P. Potter, U. S. Navy, commanding, made a survey of La Paz Bay and Harbor, Lower California, and the outer harbor of San Diego.

Some vessel of the Navy has been engaged on hydrographic surveying duty between San Francisco and Panama since 1873.

The following statement of work performed will indicate its value:

U. S. S. Narragansett, 1873-1875, Commander Dewey, U. S. Navy, commanding.—Coast line and general development of the west coast of Mexico from the boundary of the United States to Cape Corrientes, including the Gulf of California and adjacent shores.

U. S. S. Tuscarora, 1878-79, Commander Philip, U. S. Navy, commanding.—Line of deep-sea soundings from San Diego to Panama, and development of Tartar Shoal and other dangers.

U. S. S. Tuscarora, 1879-80, Commander Philip, U. S. Navy, commanding.—Survey of shore line from Sacatula River to Tehuantepec, and from Ocos River, Guatemala, to Gulf of Fonseca, Honduras. Total shore line of about 800 miles, including detailed surveys of 16 ports and anchorages.

U. S. S. Ranger, 1881-1883, Commander Philip, U. S. Navy, commanding.—Deep-sea soundings in the Gulf of California; search for reported dangers; eight detailed surveys of limited area; survey of coast from Champerico, Guatemala, to Soconusco Bluff, Mexico, 167 miles of coast line.

U. S. S. Ranger, 1883-1886, Commander Clark, U. S. Navy, commanding.—Cape Corrientes to Mangrove Point, 267 miles of coast line; Gulf of Fonseca, 140 square miles of area; two detailed surveys of limited area.

U. S. S. Ranger, 1886-1890, Commander Cook, U. S. Navy, and Lieutenant-Commander Reiter, U. S. Navy, commanding.—West coast of Lower California from boundary of the United States to Ballenas Bay, about 615 miles of coast line, developed to an average distance offshore of 15 miles, and including detailed surveys of about 15 ports, bays, and anchorages. Total area of hydrography thus covered, upward of 9,000 square miles, with corresponding amount of topography. Number of soundings taken in one season, about 29,300.

U. S. S. Ranger, 1891, Commander Wingate, U. S. Navy, commanding.—Ampala Harbor, Honduras.

U. S. S. Thetis, 1892-93, Commander Reiter, U. S. Navy, commanding.—San Ignacio Lagoon to Pequena Bay, about 70 miles, with development offshore to average distance of 40 miles.

U. S. S. Thetis, 1893-94, Lieut. Commander Hutchins, U. S. Navy, commanding.—Pequena Bay to Boca de las Animas, about 30 miles of coast line, with offshore development to about 55 miles, and two detailed surveys.

U. S. S. Thetis, 1894-95, Lieut. Commander Hutchins, U. S. Navy, commanding.—Coast line from Boca de las Animas to entrance of Magdalena Bay, about 77 miles.

U. S. S. Thetis, 1895-96, Lieut. Commander Knorr, U. S. Navy, commanding.—Shore line from Magdalena Bay to Todos Santos, about 200 miles, including three detailed developments.

U. S. S. Thetis, 1896-97, Commander Sebree, U. S. Navy, commanding.—Shore line from Todos Santos to Pescadero Point, about 120 miles, and two detailed developments.

U. S. S. Alert, 1898, Commander Leutze, U. S. Navy, commanding.—Brito Harbor, Nicaragua.

U. S. S. Ranger, 1900-1902, Commander Field, U. S. Navy, and Commander Potter, U. S. Navy, commanding.—East coast of Lower California, Pescadero Point to La Paz, about 500 square miles, with several detailed developments; also small surveys in the Gulf of Panama and San Diego, Cal.

The work has been completed with the exception of the Gulf of Lower California, which has but just been commenced. Owing to the discovery of coal mines and the inauguration of industries in Mexico which have their tide-water outlet on the Gulf of Lower California and which are prosecuted with American capital, it becomes extremely important to have accurate charts of the coast of this gulf. The present charts are made from hydrographic reconnaissances.

The hydrographic work of the *Yankton*, *Vixen*, *Eagle*, and *Ranger* was of a high order and could only have been accomplished by much arduous and constant work. The officers and crews of these ships merit the praise of the Department for the results obtained.

The following hydrographic surveys, many of which are of great importance, have been made by ships detailed for other duty:

The U. S. Fish Commission steamer *Albatross*, Commander Chauncey Thomas, U. S. Navy, commanding, made a complete survey of Laysan Island, in the North Pacific.

The U. S. S. *Annapolis*, Commander Karl Rohrer, U. S. Navy, commanding, made a complete survey of the harbor of Polloc, island of Mindanao.

The U. S. S. *Arayat*, Lieut. W. R. Shoemaker, U. S. Navy, commanding, made an information reconnoissance of ports of Luzon, Marinduque, Santa Cruz, Romblon, Gigantes, and Kagayan islands, also Port Royalist, Palawan, and other localities in the Philippine Islands.

The U. S. S. *Atlanta*, Capt. E. C. Pendleton, U. S. Navy, commanding, made a chart of approaches to Desterro, Santa Catharine Island, Brazil, and searched for reported danger off the coast of Uruguay.

The U. S. S. *Castine*, Commander C. G. Bowman, U. S. Navy, commanding, made a sketch survey of anchorage south of the island of Kalaguan, P. I.

The U. S. S. *Cincinnati*, Commander T. C. McLean, U. S. Navy, commanding, made a hydrographic reconnoissance off Santo Domingo City.

The U. S. S. *Concord*, Commander G. Blocklinger, U. S. Navy, commanding, made a reconnoissance of Kiska Bay and Bay of Waterfalls, Aleutian Islands.

The U. S. S. *Dixie*, Capt. R. M. Berry, U. S. Navy, commanding, searched for reported shoal in Old Bahama channel.

The U. S. S. *Dolphin*, Lieut. Commander Albert Gleaves, U. S. Navy, commanding, made a thorough survey of that part of the southeastern coast of Santo Domingo between Cape Engano on the east and Catuano Pass on the west; also a careful examination of the western part of the Mona Passage.

The U. S. S. *Don Juan de Austria*, Commander T. C. McLean, U. S. Navy, commanding, made sketch surveys of anchorages at Don-sol and Passacoa, Luzon, P. I.

The U. S. S. *General Alava*, Lieut. E. A. Anderson, U. S. Navy, commanding, made a reconnoissance of anchorage in Palaui Island, Luzon, P. I.

The U. S. S. *Helena*, Commander R. R. Ingersoll, U. S. Navy, commanding, made a reconnoissance of a port of the Chinese coast.

The U. S. S. *Iowa*, Capt. Thomas Perry, U. S. Navy, commanding, made a survey of channel way between Panama Railroad Company's pier and deep-water anchorages, Panama Bay, United States of Colombia.

The U. S. S. *Kearsarge*, Capt. B. H. McCalla, U. S. Navy, commanding, searched for shoal in Colon Harbor, United States of Colombia.

The U. S. S. *Leyte*, Ensign L. R. Sargent, U. S. Navy, commanding, made a reconnoissance of Lingaran and Masipit anchorages and mouth of Agusan River, Mindanao, P. I.

The U. S. S. *Machias*, Commander Henry McCrea, U. S. Navy, commanding, made a reconnoissance of the southeast coast of Haiti.

The U. S. S. *Marietta*, Commander J. A. Rodgers, U. S. Navy, commanding, made a survey to locate shoal, Colon, United States of Colombia.

The U. S. S. *Massachusetts*, Capt. H. N. Manney, U. S. Navy, commanding, made an examination of Matanzas Harbor, Cuba, and of channel leading to Great Harbor, Culebra Island.

The U. S. S. *Mohican*, Capt. A. R. Couden, U. S. Navy, commanding, searched for reported dangers in the North Pacific Ocean.

The U. S. S. *Scorpion*, Commander N. Sargent, U. S. Navy, commanding, made a surveying reconnoissance in the West Indies.

The U. S. S. *Topeka*, Commander J. A. H. Nickels, U. S. Navy, commanding, searched for shoal in Old Bahama channel and for Fawn Shoal in the Atlantic.

The U. S. S. *Wheeling*, Commander G. Blocklinger, U. S. Navy, commanding, searched for reported dangers in the North Pacific Ocean.

The U. S. S. *Yorktown*, Commander A. Ward, U. S. Navy, commanding, made a complete survey of Port Salomague, Luzon, P. I.

LAKE SURVEYS.

The U. S. S. *Michigan*, Lieut. Commander William Winder, U. S. Navy, commanding, made a survey of South Fox Island Shoal, Lake Michigan.

DEEP SEA SOUNDINGS.

The U. S. S. *Dolphin*, Lieut. Commander Albert Gleaves, U. S. Navy, commanding, ran a line of deep-sea soundings from Cape Hatteras to the Mona Passage, in the course of which the greatest known depth in the Atlantic Ocean was discovered.

The U. S. Fish Commission steamer *Albatross*, Commander J. F. Moser, U. S. Navy, commanding, ran lines of soundings from San Francisco to Marquesas Islands and in the vicinity of the Marquesas, Tuamotu, Tonga, Fiji, Ellis, Marshall, Caroline, and other groups;

and later, under the command of Commander C. Thomas, U. S. Navy, ran lines of soundings on and in the vicinity of Erben Bank, Two Brothers Reef, Maro Reef, and Dowsett Reef in the North Pacific, during which two new shoals were discovered and located.

The U. S. S. *Iowa*, Capt. Thomas Perry, U. S. Navy, commanding, made soundings on the west coast of South America.

The U. S. flagship *New York*, Capt. M. R. S. Mackenzie, U. S. Navy, commanding, made soundings in the Gulf of Pechili.

SURVEYS OF THE PACIFIC OCEAN.

The Bureau renews its recommendation of previous years that the Pacific Ocean be carefully examined west of the meridian of the Hawaiian Islands for the purpose of definitely locating dangers to navigation, the positions of many being imperfectly known; also for the purpose of determining the existence or nonexistence of a large number of dangers now shown upon the charts, which have been reported from time to time in years past.

PHILIPPINE LONGITUDE EXPEDITION.

The accurate determination of the latitude and longitude of certain reference points in the Philippine Archipelago for making a comprehensive hydrographic survey being absolutely necessary, a party under the charge of Commander J. A. Norris, U. S. Navy, is now engaged on this duty. The longitude of Manila was very accurately established in 1881 by the U. S. Navy longitude expedition by telegraphic measurements, and therefore that port is now used as a base. The insular government has placed all its cable and telegraph lines at the disposal of Commander Norris for longitude work.

Commander Norris arrived in the Philippines about a year ago. His assistants were detailed by the commander in chief from the Asiatic fleet. Considerable time was required for organization and instruction of the party. Owing to long interruptions on account of the rainy season, difficulties of transportation, etc., progress at first was slow, but is now good.

HYDROGRAPHIC OFFICE.

Commander W. H. H. Southerland, U. S. Navy, is at present hydrographer.

The efficiency of this office has been maintained throughout the year, and its value to the Navy, as well as the merchant marine, has been extended, its usefulness being necessarily commensurate with that of the maritime interests of the United States.

The following branch hydrographic offices are now in existence, operating in conjunction with the main office:

Baltimore, Md.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cleveland, Ohio.
Duluth, Minn.
Galveston, Tex.
New Orleans, La.
New York, N. Y.

Norfolk, Va.
Philadelphia, Pa.
Portland, Me.
Portland, Oreg.
Port Townsend, Wash.
Sault Ste. Marie, Mich.
San Francisco, Cal.
Savannah, Ga.

It is recommended that branch offices be also regularly authorized for the ports of Manila, P. I., and Pensacola, Fla., the interests of navigation rendering such action expedient. Previous reports of the Bureau have described the detail work of the branch offices, from which their usefulness is clearly evident.

Ninety-one new charts have been constructed during the past fiscal year.

Sixty-seven charts have been partially redrawn and reengraved for the purpose of incorporating the results of hydrographic information newly acquired.

Sixty-eight new charts were in course of construction at the close of the fiscal year.

Five hundred and ninety-five chart plates have received corrections.

There are now in the possession of the Bureau in a condition for use for the purpose of supplying reliable charts to ships of the Navy and to the mercantile marine, 1,190 engraved chart plates and 49 photographic plates. One hundred and thirty-five thousand seven hundred and fifty-two charts were printed during the year. About 2,000 additional charts are necessary to render the Department independent of foreign markets for the above-mentioned purposes.

The installation of a plant of limited size for electrotyping engraved chart plates would contribute largely to economy.

Sixty-four outfits of charts and sailing directions have been issued to ships of war during the fiscal year, besides which the supply of all vessels in commission has been kept up to date by the addition of current issues.

The following Hydrographic Office charts have been expended during the fiscal year:

Sold.....	21,947
Issued to United States ships.....	19,463
Issued for other official purposes	14,618
Total	56,028

The following Coast and Geodetic Survey charts have been issued from the Hydrographic Office during the fiscal year:

To United States ships.....	14,339
For other official purposes	3,972
Total	18,311

The following British Admiralty charts have been issued from the Hydrographic Office during the fiscal year:

To United States ships.....	10,879
For other official purposes	353
Total	11,232

The following publications have been issued from the Hydrographic Office during the fiscal year:

Pilot Chart of the North Atlantic Ocean, published about the 1st day of each month; average number of copies issued monthly, about 4,000.

Pilot Chart of the Pacific Ocean, published about the 5th day of each month; average number of copies issued monthly, about 1,500.

Hydrographic Bulletin, published each Wednesday; average number of copies issued weekly, about 2,200.

Notices to Mariners, and extracts therefrom, published each Saturday, which contained throughout the year a total of 1,782 items of hydrographic information; average weekly distribution, about 18,000 copies.

Besides these periodicals the Hydrographic Office has published three volumes of Sailing Directions, and five supplements to Sailing Directions previously issued. It has also kept up the current editions of Light Lists, The International Signal Code, The American Practical Navigator, and other kindred publications. Work has been carried on in connection with the future issue of a revised edition of the American Practical Navigator, of various volumes of Sailing Directions, and of extended Azimuth Tables.

The Bureau in its report of last year called attention to the lack of officers detailed for duty in the Hydrographic Office. This is especially apparent in the preparation of Sailing Directions. The sailing directions at present published by the Hydrographic Office should be extended to cover all of the navigable waters of the world in order that United States naval vessels may be independent of foreign supply; to accomplish this work and to keep up to date those that have previously been published, the force of officers should be largely increased. Officers on the retired list could be efficiently employed for this duty, but no person who has not had mature experience at sea in a responsible capacity can be considered qualified to undertake the duties of editing and compiling sailing directions.

UNITED STATES NAVAL OBSERVATORY.

Capt. C. H. Davis, U. S. Navy, has continued as Superintendent of the Naval Observatory during the past year.

The work accomplished at the Observatory since the last annual report of the Bureau is fully described in the report of the Superintendent, which is transmitted herewith. This report is clear and brief, and no abbreviation can be made without eliminating important information. The statements of the Superintendent are approved by the Bureau and commended to your careful attention.

NAUTICAL ALMANAC OFFICE.

Prof. W. S. Harshman, U. S. Navy, has continued during the past year to perform the duties of director of the Nautical Almanac. His report is included in that of the Superintendent of the Observatory. The work of the office is fully up to date.

The proceeds of sales of the publications of the office amounted to \$1,831.72 during the year. This sum has been deposited, in compliance with law, to the credit of the Treasurer of the United States on account of printing and binding.

The recommendations of the director of the Nautical Almanac concerning a small appropriation for the purchase of books of reference and some increase in the salaries of the personnel of the office are approved, and it is hoped they may be granted.

ject very much attention, and his efforts are chiefly confined to attending to the correspondence of the Bureau on this particular branch. Lieut. J. M. Hudgins, U. S. Navy, is devoting most of his time to this duty, although attached to the Bureau for other work. These three officers are all who have thus far made a study of wireless telegraphy and, in the opinion of the Bureau, are insufficient.

In view of the great importance of wireless telegraphy as a means of communication between ships at sea and between ships and shore stations, and in consideration of the greatly increased value of such communication in time of war, the attention of the Department is invited to certain facts in connection with this subject, which, in the opinion of the Bureau, require action on the part of the Government.

It appears to be well established that the operation of any wireless transmitting apparatus will affect any wireless receiving apparatus within a certain distance, which distance may be considered as its radius of influence. As a direct consequence thereof the signals which may be sent by other wireless transmitters within this radius of influence will be more or less obscured at all receiving stations within the same circuit; in other words, when the transmission of wireless messages is attempted by two or more operating stations at the same time, their interference will probably prevent the reception of a legible message at any receiving station. It is claimed by certain inventors that this interference can be overcome, but these claims do not appear to be substantiated, and it is therefore possible at present for any operator controlling a powerful transmitting apparatus to prevent the reception of a message within its radius of influence.

In consideration of these facts it therefore becomes important, in the opinion of the Bureau, that all wireless transmitting and receiving stations should be brought under the control of the Government. It also appears important that this should be done before the vested interests in connection therewith have become too great. The Bureau has especially in mind a large wireless station recently established by a foreign company on Cape Cod.

The Bureau is officially informed that foreign governments are exercising careful supervision over the location of wireless stations within their respective territorial limits with a view of having at all times absolute control thereof. In time of war the Department will undoubtedly find it necessary to communicate by means of wireless telegraphy with certain receiving stations along the coast. Nothing should be permitted to interfere with the transmission of such messages, nor should it be possible for unauthorized persons to receive them.

The only practical method of insuring this result is to secure Government control over all wireless-telegraph stations along the coast. It is suggested that legislation to this end be requested.

COMPASS OFFICE.

Lieut. Commander W. S. Schuetze, U. S. Navy, served as superintendent of compasses from the beginning of the fiscal year until his death, April 4, 1902. Lieutenant-Commander Schuetze had previously been in charge of the compass office and done much to perfect compasses and their appliances. He was an accomplished officer, and his death is a serious loss to the naval service.

Lieutenant-Commander Schuetze was succeeded as superintendent by Lieut. Commander C. J. Badger, U. S. Navy. Ensign W. L. Var-num, U. S. Navy (retired), continues as assistant to the superintendent.

The work of the compass office has been so fully described and its importance dwelt upon in former annual reports of the Bureau that no extended reference to it seems to be necessary at present.

The estimated expenditures for compass appliances for the next fiscal year are \$33,293.

Only 9 officers have been ordered to the compass office for instruction during the past year, as against 23 officers during the preceding year. The great advantage of a course of instruction in the compass office, however, is so well understood that many officers on duty in Washington have volunteered for instruction and taken a partial course from time to time as their other duties permitted.

As in past years, new instruments for measuring the speed of ships, for sounding, and for other purposes in connection with the safe navigation of ships have been examined, reported upon, and, when possible, tested by the superintendent.

Reference is made to the last two annual reports of the Bureau, containing descriptions and illustrations of proposed new forms of compass cards.

Discussion on these types of cards was invited, and the Bureau is now in possession of opinions on the proposed new methods from many naval officers, some of whom are hydrographers of international reputation. While a large number are in favor of an immediate change, the general opinion of practical seamen appears to be in opposition to any radical departure from the present method of marking compass cards in points and in 90° divisions.

OFFICERS ON DUTY UNDER THE BUREAU.

The following-named officers are now attached to the Bureau for duty; the total number is 48. The Bureau desires to commend them for the efficient performance of their duties.

BUREAU OF EQUIPMENT.

Commander T. E. D. W. Veeder, U. S. Navy, Senior Assistant.
Lieut. Commander C. C. Rogers, U. S. Navy, Assistant.
Lieut. A. M. Beecher, U. S. Navy, Assistant.

OFFICE OF INSPECTOR OF ELECTRICAL APPLIANCES.

Lieut. Harry George, U. S. Navy, Inspector.
Lieut. J. M. Hudgins, U. S. Navy, Assistant.

COMPASS OFFICE.

Commander C. J. Badger, U. S. Navy, Superintendent.
Ensign W. L. Varnum, U. S. Navy (retired), Assistant.

NAVAL OBSERVATORY AND NAUTICAL ALMANAC OFFICE.

Capt. C. H. Davis, U. S. Navy, Superintendent.
Lieut. Commander E. E. Hayden, U. S. Navy, Assistant.
Prof. A. N. Skinner, U. S. Navy, Assistant.
Prof. W. S. Eichelberger, U. S. Navy, Assistant.
Prof. F. B. Littell, U. S. Navy, Assistant.
Prof. W. S. Harshman, U. S. Navy, Director Nautical Almanac.
Lieut. Commander T. D. Griffin, U. S. Navy, Mare Island Observatory.

BUREAU OF EQUIPMENT.

HYDROGRAPHIC OFFICE.

Commander W. H. H. Southerland, U. S. Navy, Hydrographer.
 Lieut. George W. Logan, U. S. Navy, Assistant.
 Commander R. G. Peck, U. S. Navy (retired), Assistant.
 Lieut. Commander Holman Vail, U. S. Navy (retired), Assistant.
 Lieut. C. M. McCartney, U. S. Navy (retired), Assistant.

BRANCH HYDROGRAPHIC OFFICES.

Lieut. J. Franklin, U. S. Navy (retired), Baltimore, Md.
 Ensign W. G. Richardson, U. S. Navy (retired), Boston, Mass.
 Lieut. W. H. Faust, U. S. Navy (retired), Buffalo, N. Y.
 Capt. E. H. Gheen, U. S. Navy, Chicago, Ill.
 Lieut. J. W. Stewart, U. S. Navy (retired), Galveston, Tex.
 Lieut. C. A. Foster, U. S. Navy (retired), New Orleans, La.
 Lieut. Commander James H. Sears, U. S. Navy, New York, N. Y.
 Lieut. Ridgley Hunt, U. S. Navy (retired), New York, N. Y.
 Lieut. A. C. McMechan, U. S. Navy (retired), Norfolk, Va.
 Lieut. H. M. Jacoby, U. S. Navy (retired), Philadelphia, Pa.
 Ensign Creighton Churchill, U. S. Navy (retired), Sault Ste. Marie, Mich.
 Lieut. J. C. Barnett, U. S. Navy (retired), San Francisco, Cal.
 Lieut. F. W. Greenleaf, U. S. Navy (retired), Savannah, Ga.

INSPECTORS OF EQUIPMENT.

Naval Constructor H. G. Gillmor, U. S. Navy, Bath, Me.
 Lieut. Commander E. E. Wright, U. S. Navy, South Boston and Quincy, Mass.
 Lieut. Claude Bailey, U. S. Navy, Schenectady, N. Y.
 Lieut. Commander W. P. White, U. S. Navy, Elizabethport, N. J., and Morris Heights, N. Y.
 Lieut. Lucien Flynne, U. S. Navy (retired), Philadelphia, Pa., and Wilmington, Del.
 Lieut. Commander W. S. Hogg, U. S. Navy, Baltimore and Sparrows Point, Md., and Richmond, Va.
 Lieut. Commander P. J. Werlich, U. S. Navy, Newport News, Va.
 Lieut. Commander Simon Cook, U. S. Navy, San Francisco, Cal.
 Commander T. H. Stevens, U. S. Navy, Seattle, Wash.

SPECIAL DUTY.

Capt. C. H. Arnold, U. S. Navy, President Wireless Telegraph Board.
 Capt. L. C. Logan, U. S. Navy, Inspector of Construction, United States Naval Coal Depot, Frenchman Bay, Maine.
 Commander J. A. Norris, U. S. Navy, Philippine Longitude Expedition.
 Commander George L. Dyer, U. S. Navy, Wireless Telegraph Board.
 Lieut. B. C. Decker, U. S. Navy, Inspector of Construction, United States Naval Coal Depot, Sangley Point, Philippine Islands.
 Lieut. J. M. Hudgins, U. S. Navy, Wireless Telegraph Board.
 Civil Engineer George A. McKay, U. S. Navy, Inspector of Construction, United States Naval Coal Depot, Narragansett Bay, Rhode Island.
 Commander F. M. Barber, U. S. Navy (retired), Investigation of Systems of Wireless Telegraphy Abroad.

The Bureau quotes herewith from a report recently made concerning the duties performed by officers attached to the Bureau:

The Bureau desires to invite your attention to the fact that great pressure has been exercised by the Department on this Bureau for officers for duty afloat and elsewhere during the past four years. The Bureau has made every possible exertion to meet this demand. In this connection your attention is invited to the large number of retired officers now on duty under this Bureau; that there are no more is not the fault of the Bureau, as set forth in a supplemental statement.

The Bureau fully recognizes the very great importance of having as large a naval force afloat as possible. This force constitutes the Navy, and all conscientious officers, particularly those high in authority and in the councils of the Department, will work faithfully with this end in view. This the Bureau has done.

The Bureau desires, however, to state that efforts in this direction, if carried too far, may, in its opinion, result in decreasing rather than increasing the efficiency of

the Navy. Any material or organization, however elastic, if expanded too far will collapse. The Bureau considers that the end sought is to place as large a force afloat as possible, maintaining throughout the service at the same time the high state of efficiency maintained in the past. Any departure from past methods must be in the nature of an experiment. It would be unfortunate if this experiment proved to be a failure.

The Bureau fully believes that not only can the force of officers at its disposal not be decreased, but that it has already been too much depleted. Of this the Bureau concerned must be the best judge.

CLERICAL FORCE.

The members of the clerical force of this Bureau have been efficient and faithful in the performance of their duties. Overtime work is constant. The Bureau desires to commend them to your favorable consideration.

ASSISTANT CHIEF OF BUREAU.

The Bureau has urgently recommended in the past that an assistant be provided who shall have authority to act in the absence of the Chief of Bureau. This recommendation is renewed.

OFFICE SPACE.

The four rooms on the third floor of the Navy Department assigned to the Bureau of Equipment are totally inadequate to accommodate the personnel of the Bureau. The condition of these rooms is unsanitary from overcrowding and bad ventilation. It is a great hardship for the clerical force of the Bureau to be subjected to this state of affairs, and there is no doubt that the health of many is seriously affected thereby.

REPORTS FROM SUBORDINATE BRANCHES OF THE BUREAU.

The reports of the Superintendent of the Naval Observatory, the hydrographer to the Bureau, the superintendent of compasses, the inspector of electrical appliances, and the director of the Nautical Almanac are inclosed herewith. They contain much of great value to the service, and their recommendations are approved by the Bureau. Your examination of these reports is respectfully urged.

ESTIMATES.

The estimates for the fiscal year ending June 30, 1904, are herewith submitted.

Very respectfully,

R. B. BRADFORD,
Chief of Bureau.

The SECRETARY OF THE NAVY.

**ESTIMATES OF APPROPRIATIONS REQUIRED FOR THE SERVICE
OF THE FISCAL YEAR ENDING JUNE 30, 1904, BY THE BUREAU
OF EQUIPMENT, NAVY DEPARTMENT.**

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
SALARIES.			
One chief clerk (R. S., p. 70, sec. 415; appropriated Apr. 28, 1902; pamphlet edition legislative, executive, and judiciary bill, p. 37)	\$2,000.00		
One draftsman, who shall be an expert in marine construction (same act, p. 37)	2,000.00		
One clerk of class four (same act, p. 37)	1,800.00		
One electrical expert and draftsman (same act, p. 37)	1,600.90		
One clerk of class two (same act, p. 37)	1,400.00		
One clerk of class one (same act, p. 37)	1,200.00		
One draftsman, for work in connection with depots for coal (same act, p. 37)	1,200.00		
One copyist (same act, p. 37)	900.00		
One assistant messenger (same act, p. 37)	720.00		
One laborer (same act, p. 37)	660.00		
One messenger boy (same act, p. 37)	360.00		
		\$13,840.00	\$13,840.00

NOTE.—The following is a statement in detail, submitted in compliance with the provisions of the act approved Apr. 17, 1900, showing the number of persons employed in the Bureau and the rate of compensation of each on Sept. 1, 1902.

Appropriation "Increase of the Navy, equipment:"

	Per diem.	Per annum.	Total.
1 writer	\$5.20	\$1,627.00	\$1,627.00
1 writer	4.00	1,252.00	1,252.00
1 draftsman	4.00	1,252.00	1,252.00
1 writer	3.52	1,101.76	1,101.76
4 copyists	3.28	1,026.64	4,106.56
2 special laborers	3.04	951.52	1,903.04
1 special laborer	1.52	475.76	475.76
1 special laborer	1.04	325.52	325.52
Total			12,043.64

NOTE.—There are no employees in this Bureau who are below a fair standard of efficiency.

CIVIL ESTABLISHMENT.

Navy-yard, Portsmouth, N. H.:

One clerk (appropriated July 1, 1902; pamphlet edition naval bill, p. 8) 1,200.00 || One writer (same act, p. 8) | 950.00 |

Navy-yard, Boston, Mass.:

One superintendent of ropewalk (same act, p. 8) 1,875.00 || One clerk (same act, p. 8) | 1,400.00 |
One clerk (same act, p. 8)	1,300.00
One clerk (submitted)	1,200.00
Two writers at \$950 each (appropriated July 1, 1902; pamphlet edition naval bill, p. 8)	1,900.00

Navy-yard, New York:

One clerk (same act, p. 8) 1,400.00 || One clerk (same act, p. 8) | 1,200.00 |
| Two writers at \$950 each (same act, p. 8) | 1,900.00 |
| One clerk in charge of distribution of books (same act, p. 8) | 1,200.00 |

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, etc.—Continued.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
CIVIL ESTABLISHMENT—Continued.			
Navy-yard, League Island, Pa.:			
One clerk (same act, p. 8)	\$1,400.00		
One clerk (same act, p. 8)	1,000.00		
Navy-yard, Norfolk, Va.:			
Two clerks at \$1,200 each (same act, p. 8)	2,400.00		
One writer (same act, p. 8)	950.00		
Navy-yard, Mare Island, Cal.:			
One clerk (same act, p. 8)	1,200.00		
One clerk (same act, p. 8)	1,000.00		
One writer (same act, p. 8)	950.00		
Navy-yard, Washington, D. C.:			
One clerk for the board of labor employment (same act, p. 8)	1,600.00		
Navy-yard, Pensacola, Fla.:			
One clerk (same act, p. 8)	1,000.00		
Naval station, Cavite, P. I.:			
One electrician, at \$5.04 per diem (same act, p. 8)	1,577.52		
One clerk (same act, p. 8)	1,000.00		
Naval station, Port Royal, S. C.:			
One clerk (same act, p. 8)	1,000.00		
Naval station, Key West, Fla.:			
One clerk (same act, p. 8)	1,000.00		
Navy-yard, Puget Sound, Wash.:			
One clerk (same act, p. 8)	1,000.00		
One clerk (submitted)	1,000.00		
		\$33,602.52	\$31,402.52
EQUIPMENT OF VESSELS.			
For hemp, wire, iron, and other materials for the manufacture of cordage, anchors, cables, galleys, and chains; canvas for the manufacture of sails, awnings, hammocks, and other work; water for all purposes on board naval vessels, including the expenses of transportation and storage of same; stationery for chaplains and for commanding and navigating officers of ships, equipment officers on shore and afloat, and for the use of courts-martial on board ship; the removal and transportation of ashes from ships of war; interior appliances and tools for equipment buildings in navy-yards and naval stations; supplies for seamen's quarters; and for the purchase of all other articles of equipment at home and abroad, and for the payment of labor in equipping vessels and manufacture of equipment articles in the several navy-yards; all pilotage and towage of ships of war; canal tolls, wharfage, dock and port charges, and other necessary incidental expenses of a similar nature; services and materials in repairing, correcting, adjusting, and testing compasses on shore and on board ship; nautical and astronomical instruments, and repairs to same; libraries for ships of war, professional books and papers, and drawings and engravings for signal books; naval signals and apparatus, namely, signals, lights, lanterns, rockets, and running lights; compass fittings, including binnacles, tripods, and other appendages of ship's compasses; logs and other appliances for measuring the ship's way, and leads and other appliances for sounding; lanterns and lamps, and their appendages for general use on board ship for illuminating purposes, and oil and candles used in connection therewith; bunting and other materials for making and repairing flags of all kinds; photographs, photographic instruments and materials; musical instruments and music; installing, maintaining, and repairing interior and exterior signal communications and all electrical appliances of whatsoever nature on board naval vessels, except range finders, battle order and range transmitters and indicators, and motors and their controlling apparatus used to operate the machinery belonging to other Bureaus (appropriated July 1, 1902; pamphlet edition naval bill, p. 7)		2,750,000.00	2,000,000.00
COAL EQUIPMENT.			
For purchase of coal for steamers' and ships' use, and other equipment purposes, including expenses of transportation, storage, and handling the same (appropriated July 1, 1902; pamphlet edition naval bill, p. 7)		2,500,000.00	2,500,000.00

SCHEDULE OF OFFERS RECEIVED BY THE BUREAU DURING THE FISCAL YEAR 1902.

SCHEDULE OF OFFERS FOR THE CONSTRUCTION OF A COALING PLANT AT SANGLEY POINT, MANILA BAY, PHILIPPINE ISLANDS, OPENED DECEMBER 3, 1901.

Atlantic, Gulf and Pacific Company:

Plan A—

Item 1a.....	\$759,730.00
Item 1b.....	^a 734,730.00
Item 1c.....	739,230.00
Item 2a.....	456,365.00
Item 2b.....	443,865.00
Item 2c.....	446,115.00

Plan B—

Item 3a.....	757,730.00
Item 3b.....	732,730.00
Item 3c.....	737,230.00
Item 4a.....	455,365.00
Item 4b.....	442,865.00
Item 4c.....	445,115.00

Snare & Triest:

Item 1.....	1,258,600.00
Item 1a.....	(b)
Item 1b.....	(b)
Item 1c.....	(b)
Item 1d.....	(b)
Item 1e.....	(b)
Item 1f.....	(b)
Item 1g.....	(b)
Item 1h.....	(b)
Item 1k.....	(b)
Item 2.....	752,500.00
Item 2a.....	(c)
Item 2b.....	(c)
Item 2c.....	(c)
Item 2d.....	(c)
Item 2e.....	(c)
Item 2f.....	(c)
Item 2g.....	(c)
Item 2h.....	(c)
Item 2k.....	(c)
Item 3.....	1,393,000.00
Item 3a.....	(d)
Item 3b.....	(d)
Item 3c.....	(d)
Item 3d.....	(d)
Item 3e.....	(d)
Item 3f.....	(d)
Item 3g.....	(d)
Item 4.....	953,700.00

^a Awarded after modification reducing cost to \$553,510.

^b Modification of item 1.

^c Modification of item 2.

^d Modification of item 3.

Snare & Triest—Continued.

Item 4a.....	(a)
Item 4b.....	(a)
Item 4c.....	(a)
Item 4d.....	(a)
Item 4e.....	(a)
Item 4f.....	(a)
Item 4g.....	(a)
Item 5.....	\$1,328,000.00
Item 5a.....	(b)
Item 5b.....	(b)
Item 5c.....	(b)
Item 5d.....	(b)
Item 5e.....	(b)
Item 5f.....	(b)
Item 5g.....	(b)
Item 6.....	877,400.00
Item 6a.....	(c)
Item 6b.....	(c)
Item 6c.....	(c)
Item 6d.....	(c)
Item 6e.....	(c)
Item 6f.....	(c)
Item 6g.....	(c)
Item 7.....	469,300.00
Item 7a.....	(d)
Item 7b.....	(d)
Item 7c.....	(d)
Item 7d.....	(d)
Item 7e.....	(d)
Item 8.....	(e)
Item 9.....	14,000.00
Item 10.....	(f)

SCHEDULE OF OFFERS FOR REMOVING AND REMODELING A BARN AT
NAVAL COAL DEPOT, FRENCHMEN BAY, MAINE, OPENED JANUARY
8, 1902.

Austin M. Foster.....	g \$4,888.80
Snare & Triest.....	6,790.00
Hodgkins & Gault.....	5,494.00
Carlton McGowan.....	4,943.00

SCHEDULE OF OFFERS FOR SUPPLYING COAL, PROVENDER, AND ICE
FOR THE UNITED STATES NAVAL OBSERVATORY, OPENED MAY 1,
1902.

Coal:	
J. Edward Chapman.....	g \$3,360.00
John B. Daish.....	3,414.00
Provender:	
John B. Daish.....	831.70
W. M. Galt & Co.....	g 801.50
Herbert P. Pillsbury.....	836.00
Ice:	
American Ice Company.....	g 202.50

^a Modification of item 4.

^b Modification of item 5.

^c Modification of item 6.

^d Modification of item 7.

^e Deduct for each coal shed, \$75,000.

^f For galvanized wire netting in frame between tunnels of buildings, 20 cents per square foot.

^g Awarded.

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REPORT

OF THE

CHIEF OF THE BUREAU OF NAVIGATION.

DEPARTMENT OF THE NAVY,
BUREAU OF NAVIGATION,
Washington, D. C., October 6, 1902.

SIR: The administration of this Bureau was conducted by Rear-Admiral A. S. Crowninshield, U. S. Navy, now in command of the European Station, from June 30, 1901, until April 28, 1902, at which time I was appointed Chief of the Bureau.

I have the honor to present herewith a report of the Bureau of Navigation for the fiscal year ending June 30, 1902, and to inclose a report (A) showing the movements, condition, station, and service of all vessels of the Navy for the fiscal year ending upon that date, and reports of officers in charge of the various establishments under the control of the Bureau, as follows: (B) of the Chief Intelligence Officer; (C) of the Superintendent of the Naval Academy; (D) of the Commandant of the Naval Training Station, Narragansett Bay; (E) of the Commandant of the Naval Training Station, San Francisco, Cal.; (F) of the Governor of the Naval Home, Philadelphia, Pa.; (G) of the President of the Naval War College, Narragansett Bay; (H) of the Commanding Officer of the Gunnery Training Ship *Puritan*; (K, L, M, N, and O) of the Commanders in Chief of the Asiatic, North Atlantic, Pacific, South Atlantic, and European Stations, and schedule (P) of estimates for the support, during the coming fiscal year, of the Bureau and all those establishments for which appropriation is made under the Bureau.

DISTRIBUTION OF THE FLEET.

During the year which closed June 30, 1902, squadrons have been assigned as follows:

North Atlantic.—Under Rear-Admiral F. J. Higginson from July 1, 1901, to June 30, 1902. Rear-Admiral J. B. Coghlan was appointed second in command on June 2, 1902.

The Pacific.—Rear-Admiral Silas Casey from July 1, 1901, to June 30, 1902.

The European.—Rear-Admiral B. J. Cromwell from July 31, 1901, until February 9, 1902, when he was detached, leaving Capt. Joseph E. Craig as senior officer present until May 18, 1902, the date of the

arrival of Rear-Admiral A. S. Crowninshield, who remained in command until the end of the fiscal year.

The South Atlantic.—Rear-Admiral B. J. Cromwell from July 1, 1901, to July 7, 1901, when he was detached, leaving Commander E. C. Pendleton, commanding the U. S. S. *Atlanta*, as senior officer present until the arrival of the *Iowa* at Montevideo on February 12, 1902, when Capt. Thomas Perry became senior officer present until March 16, 1902, the date of the arrival of Rear-Admiral G. W. Sumner, who remained in command until the end of the fiscal year.

The Asiatic.—Rear-Admiral George C. Remey, commander in chief, with Rear-Admiral Frederick Rodgers as senior squadron commander and Rear-Admiral Louis Kempff, junior squadron commander, from July 1, 1901, until March 1, 1902, on which date Rear-Admiral Frederick Rodgers assumed command as commander in chief, with Rear-Admiral Frank Wildes as senior squadron commander until April 27, 1902, when Rear-Admiral Robley D. Evans reported as senior squadron commander, thus making Rear-Admiral Frank Wildes junior squadron commander, and in this order the squadron remained until the end of the fiscal year June 30, 1902.

The conditions in the Philippines have become more settled, and have permitted the Department to look forward to some more permanent arrangement of vessels for that station and China.

The plan for the assignment of vessels to the various squadrons at the close of the fiscal year June 30, 1902, was to divide the battleships of the Navy into two squadrons, one upon the North Atlantic Station and one upon the Asiatic Station. It is believed that for the present two squadrons are all that the number of our battleships will permit. In carrying out this policy it will be necessary to transfer the battleships which are now flagships of other squadrons to one of these two squadrons. This will involve the use of large cruisers as flagships of the remaining squadrons, namely, the Pacific, European, and the South Atlantic. This plan provided for 5 cruisers in the Pacific, with the *New York* as flagship; 4 cruisers in the European Station with the *Brooklyn* as flagship; 3 cruisers in the South Atlantic Station with the *Newark* as flagship. The arrangement at the close of the year, therefore, contemplated the *Oregon* and *Wisconsin* to reinforce the Asiatic Squadron, and the *New York* to return from that station to the Pacific as flagship. Many of the changes proposed by the above will be undertaken when the winter maneuvers in the West Indies shall concentrate three squadrons there.

The Department decided in the spring of 1902 to prepare a group of vessels to be in readiness to meet the frequent calls made for the services of our Navy in different quarters of the Caribbean and West Indies.

The Department contemplates maintaining in this division five cruisers, with the *Olympia* as flagship, to be based upon Culebra, and including a force of marines on board a transport. It is to be known as the Caribbean division of the North Atlantic Station, and will be commanded by Rear-Admiral J. B. Coghlan, U. S. Navy, who is second in command of the North Atlantic Station.

It is hoped that at an early date the vessels now doing duty as training ships may be concentrated under a flag officer, who will direct their cruising and assemble them at proper time for comparison of their efficiency.

According to the plan which was decided upon at the end of the fiscal year June 30, 1902, the distribution of the principal fighting force of the Navy will be as follows:

North Atlantic Station: *Kearsarge, Alabama, Massachusetts, Indiana, Maine, Illinois, Iowa, and Texas.* This force should be in the future maintained at not less than 8 battleships.

Caribbean division of North Atlantic Station: *Olympia, Montgomery, Marietta, Machias, Panther, and Detroit.*

Asiatic Station: *Kentucky, Oregon, Wisconsin, Monadnock, and Monterey.* The battleships in this squadron are to be increased to the number of 6 as soon as vessels of this class are commissioned.

The cruiser division of Asiatic Station: *New Orleans, Yorktown, Wilmington, Helena, Vicksburg, Princeton, Annapolis, Don Juan de Austria, and Isla de Cuba.* The *Rainbow* and a large gunboat division, will, as heretofore, be attached to the squadron for service among the islands and the rivers.

Pacific Station: *New York, Philadelphia, Boston, Marblehead, and Ranger.*

European Station: *Brooklyn, Chicago, San Francisco, and Albany.*

South Atlantic Station: *Newark, Atlanta, and Nashville.*

Since the last annual report many torpedo destroyers and torpedo boats have come forward and several have been commissioned. In the spring of 1902 it was determined to form a torpedo flotilla with a destroyer as leading vessel, and that these torpedo boats should cruise in group formation with the destroyer. This group, consisting of the *Decatur*, destroyer; *Bagley, Barney, Biddle, Shubrick, Thornton, and Stockton*, has, under the able command of Lieut. Lloyd H. Chandler, been successfully developed. It is intended to form other groups and enlarge this arm of naval warfare.

OPERATIONS OF THE FLEET.

NORTH ATLANTIC STATION.

During the summer of 1901, the North Atlantic Squadron undertook maneuvers of a serious character. In addition to tactical drills and target practice the squadron entered Nantucket Sound and demonstrated by actual practice the possibility of battle ships using both entrances into Nantucket and Vineyard sounds. The commander in chief, Rear-Admiral F. J. Higginson, displayed great zeal and professional ability in carrying out this work.

During the winter the squadron exercised in the West Indies, making its headquarters at Culebra, and entered upon new methods of instruction of the personnel, which under the head of "Progressive instruction" will, it is believed, advance the efficiency of the officers and men. The squadron also undertook for the first time certain drills and exercises tending to the development of fleet tactics under steam from a simple and elementary basis.

At the expiration of the period of drill and maneuvers in West Indian waters the North Atlantic Squadron proceeded north to the Southern drill grounds, and there an exhaustive military inspection of the squadron was made by a board of officers of which Admiral George Dewey was president. This inspection included target firing of the various ships and tactical maneuvers under steam, as well as minor

drills. It was carried on for the purpose of determining the degree of efficiency attained by the system of "Progressive instruction" inaugurated during the winter. The result of the inspection demonstrated that marked improvement had been made, though the target firing, while indicating improvement, had not as yet reached the efficiency which it is hoped will be attained.

This squadron has been much engaged in the preservation of order at different points in the West Indies, and the Caribbean, and has rendered valuable services at such points as were indicated to the Navy Department by the State Department. The Secretary of State has expressed himself as well pleased with the prompt response of our vessels when called upon, and with the discretion and judgment displayed by their commanding officers in dealing with subjects of a diplomatic nature.

Early on the morning of May 20 the *Olympia*, carrying the flag of the commander in chief of the North Atlantic Squadron, with the *Kearsarge* and *Alabama*, met the French battle ship *Gaulois*, having on board the members of the mission sent by the French Government to take part in the ceremonies attending the unveiling of the statue of Rochambeau in Washington, and bearing the flag of Vice-Admiral Fournier, of the French Navy, and escorted that vessel to Annapolis. Afterwards the *Olympia* and *Kearsarge* proceeded to Boston to assist at that port in the reception of the French visitors of the Rochambeau mission.

The following changes were made in the North Atlantic Squadron during the fiscal year:

Attached: *Indiana*, February 8, 1902; *Machias*, August 28, 1901; *Marietta*, September 26, 1901; *Olympia*, April 4, 1902; *Brooklyn*, June 2, 1902.

Detached: *Potomac*, April 24, 1902; *Indiana*, April 23, 1902.

The maneuvers of the North Atlantic Squadron during the summer of 1902, which were of much professional interest, will be embodied in the report of June 30, 1903.

During the coming winter, operations will be carried on in the West Indies, and will include the concentration of the three squadrons, North Atlantic, European, and South Atlantic, at Culebra, and the mobilization of various additional vessels and auxiliaries. When this concentration is affected a period of drills and exercises will take place, after which the squadrons will disperse to their respective stations. These operations will be under the direct command of Admiral George Dewey, with the Chief of this Bureau acting temporarily as his chief of staff.

SOUTH ATLANTIC STATION.

In the early part of July, 1901, the U. S. S. *Chicago* sailed from Rio de Janeiro, having been detached from the South Atlantic Station and ordered to proceed to the European Station for duty as the flagship of Rear-Admiral Cromwell. The U. S. S. *Iowa* was detached from the Pacific Station early in February and directed to proceed to the South Atlantic Station. She arrived at Montevideo on February 12, 1902. Since that time she has carried the flag of the commander in chief of the South Atlantic Station.

This vessel, owing to her deep draft, is unable to cruise in the river Plate. It is the desire of the Bureau to have the *Iowa* relieved by a cruiser more suitable for service on the South Atlantic Station.

The *Atlanta* has visited all the ports of the Plate River which her draft would allow her to enter, in addition to cruising on other parts of the station.

The Bureau desires to detail vessels of smaller displacement for service on this station.

PACIFIC STATION.

During the year the *Philadelphia* in addition to her other cruising made a cruise in the fall of the year with the naval militias of the States of Oregon and California on board.

The *Iowa* left the station in the early part of February and joined the South Atlantic Station.

The *Concord* was assigned to the Pacific Station on October 2, 1901, and was detached from that station and put out of commission on February 26, 1902, at the navy yard, Mare Island, Cal.

The *Wheeling* reported to the commander in chief at San Diego, Cal., on April 2, 1902, and is now doing duty as station ship at Samoa. Upon the arrival of the *Wheeling* at Tutuila on May 24 the *Abarenda* was detached from the Pacific Station.

The *Philadelphia*, *Iowa*, and *Concord*, outside of their regular cruising as described in the report of the commander in chief of the Pacific Station, have at different times during the year rendered valuable services in preserving peace and good order on the Isthmus, and guarding the transit across it.

It is the belief of the Bureau that additional vessels should be assigned to this station as the services on the Isthmus and the west coast of Central America are extremely trying owing to climatic conditions. No vessel should be required to remain on that coast for a protracted period of time. Therefore, it is necessary to have a sufficient number of small vessels attached to the station to insure frequent relief for vessels at Panama and adjacent ports on the coast of Central America.

EUROPEAN STATION.

The European Station was established during the early part of the fiscal year ending June 30, 1902, and has been continued ever since.

The *Illinois* bearing the flag of Rear-Admiral A. S. Crowninshield sailed from New York on April 30, 1902, for Naples, Italy, where she arrived in the early part of May, when Rear-Admiral Crowninshield took command of the European Station. On July 17, 1902, the *Illinois* bearing the flag of the commander in chief of the station arrived at Southampton, and on June 24 proceeded to Spithead, England, to take part in the naval review attending the coronation ceremonies of King Edward VII.

The *Albany* left the Pacific Station early in July, 1901, en route to the European Station via Singapore and other ports, and reported her arrival on the European Station on September 13, 1901. She cruised in the Mediterranean until the early part of June, 1902, when she proceeded north, touching at Gibraltar and other ports, to Cherbourg, France, where she arrived on June 30, 1902.

The *San Francisco* joined the European Station in April, 1902, and after cruising on the west coast of Africa, she proceeded north to Southampton in June.

The *Chicago* arrived on the station July 31, 1901, and cruised in the Mediterranean until June 17, 1902, when she proceeded to Havre, France.

The *Nashville* left the Asiatic Station on July 31, 1901, in company with the *Albany* for the European Station, and joined the flag of that station at Genoa, Italy, on September 22, 1901. This vessel cruised in the Mediterranean during the remainder of the year.

ASIATIC STATION.

Late in August the force on the Asiatic Station was divided into two squadrons—the Northern Squadron, for service in the northern waters of the station, and the Southern Squadron, for duty among the Philippine Islands. This division of the fleet it is believed will be continued with good results. The Bureau is of the opinion that it will be necessary to give increased authority to the squadron commanders.

In July Rear Admiral Frederick Rodgers, with the flagship *New York*, *New Orleans*, and *Yorktown*, was sent to Japan to attend the ceremonies of the unveiling of the Perry monument at Kurihama.

The successful work of our small vessels has been continued, and good order has been so far restored that further reduction of our force was found practicable, and the following-named gunboats were put out of commission and laid up for repairs: *Gardoqui*, *Leyte*, *Mindoro*, *Pampanga*, *Samar*.

Besides the above vessels being laid up for repairs or put out of commission, the following vessels were detached from the Asiatic Station: *Albany* on July 3, 1901, to the European Station; *Brooklyn*, March 1, 1902, to the navy-yard, New York; *Culgoa*, July 23, 1901, to the navy-yard, Boston, Mass.; *Bennington*, July 9, 1901, to the navy-yard, Mare Island, Cal.; *Manila*, April 15, 1902, to the navy-yard, Mare Island, Cal.; *Nashville*, July 3, 1901, to the European Station; *Petrel*, July 8, 1901, to the navy-yard, Mare Island, Cal.

On January 15, 1902, the *Rainbow* left Norfolk for the Asiatic Station, which station she joined on April 9, 1902, and is at present doing duty as flagship of the junior squadron commander, commanding the Southern Squadron.

The close blockade established by the Navy in the island of Samar contributed largely to the defeat of Lukban, the insurgent leader of that island. The services performed by the small gunboats of the Southern Squadron during this blockade was arduous and deserving of great credit. Some of the vessels of this squadron have also been engaged in surveying work, which they carried on with great success.

The Bureau is informed that the insular government of the Philippines proposes putting in commission a number of small vessels for the purpose of preserving order among the smaller islands of the archipelago and in the rivers. This force when established will, it is understood, act as a sort of "sea constabulary," and in such case our small vessels may be withdrawn from that work, thereby permitting them to devote their time to drills based upon "progressive instruction," and maneuvers similar to those which are to take place in the Caribbean Sea this winter, and also to the protection of our interests in the waters of China, Korea, and other points in the Pacific.

The cooperation of the Army and the Navy doing service in the Philippines has been cordial, and the best of relations have existed between the two military bodies.

The naval station at Cavite has many objections as the principal naval base in the Far East, and this Bureau concurs in the urgent

recommendation of Rear-Admiral Frederick Rodgers, commander in chief of the station, that Olongapo be developed as a naval station where ships of the fleet can be docked and repaired.

The employment of the force on the Asiatic Station is fully described in the reports appended of the commanders in chief of that station during the fiscal year ending June 30, 1902, Rear-Admirals George C. Remey and Frederick Rodgers.

The Bureau has arranged to increase the force of fighting ships on this station by the addition of the battleships *Wisconsin* and *Oregon*, believing that good results will be obtained by increasing the number of heavy fighting vessels for the purpose of drill and maneuvers.

NAVAL DEFENSE.

The Navy Department has for many years considered the question of a proper system for the naval defense of the coast, which should take in the various forces and vessels at the disposal of the Government for war and render them efficient by means of well-considered methods. Among the questions involved have been the rendezvous for torpedo boats and like craft, the duties of the naval militias, the best anchorages for our fleets in time of war in defending the coast, the utilizing of our telegraph and telephone systems for communication, the formation of national naval reserves, and similar details. The advance in that direction has not been satisfactory, and it is believed that better results can be attained in developing and organizing the naval defense of our coast if we divide the coast into districts under naval officers of experience, and instruct them to work in their localities in the directions above mentioned. The Bureau of Navigation, after consultation with the general board, has, therefore, recommended to the Department that such a division of the coast be made, and the Department has, for purposes of experiment, named three sections of our coast, and appointed a flag officer to the command of each. Rear-Admiral P. H. Cooper, with his headquarters at Coasters Harbor Island, in Narragansett Bay, has command of the naval defense district extending from Chatham Light, Cape Cod, to Barnegat, New Jersey; Rear-Admiral W. C. Wise, with headquarters at Pensacola, Fla., of which navy-yard he is also commandant, commands the naval defense district of the Gulf, extending from the Mexican border to Key West, Fla.; Rear-Admiral Louis Kempff, with headquarters in San Francisco Bay, commands the naval defense district extending from Puget Sound to the Mexican border. It is believed that from these districts will come, after a certain experience has been gained, suggestions of a system which will in time prove an efficient method for the naval defense of the coast, and for the utilization, without additional expense to the Government, of those facilities which already exist under the civil branches of the Government. As these districts develop systems of defense other sections of the coast will be assigned to officers of experience.

VESSELS ON SPECIAL SERVICE.

A special squadron, composed of the *Illinois*, flagship, *Olympia*, *San Francisco*, and *Cincinnati*, was organized for the reception in the United States of Prince Henry of Germany. Rear-Admiral Robley D. Evans, U. S. Navy, hoisted his flag on board the battle ship *Illinois*

and took command of this squadron on February 15, 1902. The squadron was assembled at Tompkinsville, N. Y., and there awaited the arrival of Prince Henry. The Prince on his tour through the country was accompanied by Rear-Admiral Robley D. Evans and Commander W. S. Cowles. After Prince Henry's departure from the United States the special squadron was dispersed, and Rear-Admiral Evans hauled down his flag on the battle ship *Illinois* on March 11, 1902.

In May, 1902, the U. S. S. *Brooklyn* was ordered to proceed to Havana, Cuba, to be in attendance at the ceremonies of the transfer of the authority of the United States in that island to the Cuban Government. On the day of the transfer, May 20, 1902, the *Brooklyn* dressed ship, and at noon, when the American ensign was lowered on the Morro, a national salute was fired, marine guard paraded, the ship's company manned the rail, and the band played the national air, a Cuban flag being immediately hoisted and saluted in a similar manner. The foreign ships in the port of Havana followed the movements of the *Brooklyn*. Shortly after the transfer of the Government was effected, Brig. Gen. Leonard Wood, U. S. Army, who had been governor-general of the island, came on board the *Brooklyn*, and was received with full honors due the position of governor-general. A salute of 17 guns was fired by the *Brooklyn*, as well as by the British cruiser *Psyche* and the Italian cruiser *Calabria*. These last salutes were returned by the *Brooklyn*. At 3.30 in the afternoon the *Brooklyn* proceeded to sea, to convey General Wood and his staff to a United States port.

The *Dixie*, *Cincinnati*, and *Potomac* were the vessels sent to the relief of the sufferers during the volcanic eruptions at Martinique and St. Vincent.

On May 10, 1902, telegraphic orders were sent to the commandant at San Juan, P. R., to dispatch the *Potomac* with relief supplies for the people of Martinique and St. Vincent. The *Potomac* took on board provisions and supplies, and sailed on the day of the receipt of the orders for Martinique and St. Vincent. Her cargo was landed at Martinique, as the *Indefatigable*, an English man-of-war, had brought 25 tons of stores from Trinidad for St. Vincent. Afterwards the *Potomac* was engaged in making numerous trips about the unfortunate islands for the rescue of sufferers, as well as for the recovery of the bodies of those who had perished in the American consulate at St. Pierre. In this latter work the crew of the *Potomac* were assisted by working parties from the *Cincinnati*. Before the completion of the removing of these bodies the working parties were compelled by fresh eruptions of the volcano to return to their ships, but later resumed their work on shore. The commanding officer of the *Potomac*, Lieut. B. B. McCormick, deserves great credit for the promptness he displayed in loading his vessel and carrying supplies to the sufferers, as well as for his zeal and judgment later in rendering aid wherever the services of his vessel were needed.

On May 11, 1902, the *Cincinnati* was cabled at San Domingo City to proceed to Martinique and St. Vincent to render assistance to the victims of the volcanic eruptions. On May 13, 1902, the *Cincinnati* arrived at Fort de France. Her commanding officer immediately assumed the direction of affairs regarding the relief of sufferers by the *Cincinnati* and *Potomac*. The prompt manner in which the command-

ing officer of the *Cincinnati*, Commander T. C. McLean, responded to the Department's telegraphic order and reached the scene of distress in commendable.

The *Dixie* on May 11, 1902, was ordered to take on board two months' provisions and coal as rapidly as possible. This vessel completed coal-ing and provisioning on May 13, and immediately proceeded to a wharf in Brooklyn, where she loaded with provisions and stores sent by the War Department for the relief of the distressed inhabitants of Martinique and St. Vincent. The crew of the *Dixie* worked night and day until the night of May 14, when she completed loading and sailed for Fort de France under full boiler power, and arrived at that port early in the morning of May 21. The relief stores on board of the *Dixie*, in charge of officers of the Army detailed by the War Department, were landed at Martinique and St. Vincent. That the *Dixie* was able to coal, load with stores, and arrive at the islands in such a short time was due to the untiring efforts of her commanding officer, Capt. R. M. Berry, and officers under his command.

The promptness with which these three vessels responded to the call for aid undoubtedly saved many lives and lessened the suffering of the survivors of the disaster.

The collier *Leonidas* was loaded with lumber purchased by the British Government at Norfolk and dispatched to St. Vincent, where this material was utilized to build temporary quarters for the sufferers. In no other way could lumber have reached St. Vincent at such an early date.

The *General Alava*, although manned by naval officers and crew, has been doing duty under the civil government of the Philippines.

The *Ranger* has carried on extensive surveys in the Gulf of Lower California. The *Viren*, *Eagle*, and *Yankton* have also carried on very important surveys, and deserve much credit for the successful manner in which they performed this duty. The *Dolphin*, in addition to her other duties, made surveys on the coast of San Domingo from the middle of January to the middle of March.

On September 14, 1901, the *Michigan* was ordered to Buffalo, N. Y., at which place she arrived on Sunday, September 15, and by direction of the Secretary of the Navy, who was present at Buffalo, landed a battalion and took part in the military escort which accompanied the remains of the late President McKinley to the city hall. On Monday, September 16, another battalion, exclusive of the marine guard, was landed at 7 a. m., and formed part of the escort from the city hall to the railroad station.

Besides the above duty, this vessel surveyed South Fox Island Shoal, took out the naval militias of the States of Illinois and Michigan, and was also present at the national encampment of the Grand Army of the Republic, held at Cleveland in September, 1901.

During the months of August and September, 1901, the *Alvarado* visited the North Carolina Sounds on recruiting duty, and succeeded in enlisting 74 men for the naval service.

NAVAL COLLIERS.

The collier service is now performed by the *Ajar*, *Alexander*, *Brutus*, *Cæsar*, *Hannibal*, *Justin*, *Leonidas*, *Lebanon*, *Nanshan*, *Nero*, *Pompey*, *Saturn*, and *Sterling*.

During the year ending June 30, 1901, and previous to that time, the difficulty in procuring officers and men for the vessels of war resulted in the manning of the naval colliers with merchant crews. This has been successfully done and has given fair satisfaction. It is not regarded as the best method, but as the best that was possible, owing to the scarcity of officers and men. Toward the end of the year ending June 30, 1902, enlistments of men increased in number, and it is believed that by the end of the fiscal year, June 30, 1903, some of these colliers may be manned by naval officers and crews. These vessels, as well as all other auxiliaries, will supply some training, though imperfect, for the great number of inexperienced men that we must expect for some years to come to man our ships. Every vessel that floats under naval control should be required to train men both for deck duty and for engine and fire room work. It is proposed to man one-half of these colliers with naval officers and seamen by June 30, 1903, and the remainder by June 30, 1904. It matters not how complete be the training given at barracks and on board regular training ships, there will still be much for the recruit to learn in practical seagoing vessels, much of which these colliers can supply. We will thus make a great saving in the expense of training men, and can well afford to have these vessels cost a little more for their maintenance under naval officers and seamen than they do at the present time under merchant officers and crews. No colliers or other auxiliaries connected with the Navy should be without a number of men constantly receiving training which a sea life gives them. Otherwise a great waste is incurred, especially when our service needs so many men to be trained annually. The Bureau desires, therefore, to emphasize the fact that the economy of using these colliers, while carrying coal, to instruct at the same time the enlisted force of the Navy is most marked and apparent.

When it is considered that if the men composing these crews were simply under instruction in regular training vessels of the Navy while the colliers carried merchant crews, it is evident that the increase of expense to train this number of men would be approximately the amount paid to the merchant crews. Again, the crews of the merchant service would not be available to the naval service in time of war, except by voluntary enlistment, whereas if the crews consisted of men regularly enlisted in the naval service they would be available for transfer to any vessel of war which might require their services.

TRAINING OF APPRENTICES.

During the year improvements have been made at the two training stations in Narragansett Bay, and San Francisco, Cal., all of which are enumerated in the reports of the commandants of the stations hereto appended. For lack of facilities elsewhere on the West coast for the training of landsmen, the Bureau has been compelled to use the training station at San Francisco for both apprentices and landsmen. This station being very crowded, it will in time become impossible for it to accommodate the men which the Department is obliged to send to it. In order to properly care for the enlisted men on the Pacific coast, vessels should be provided at the navy-yard, Mare Island, Cal., or the navy-yard, Bremerton, Wash., and it is suggested that until such time as Congress is willing to appropriate money for barracks, one of the army transports now offered to the

Navy by the courtesy of the War Department be used as a receiving ship, either at Mare Island or Bremerton.

Attention is called to the urgent need of small brigs at the training stations for the exercise of the recruits in the waters adjacent to the stations, and it is recommended that three such vessels be appropriated for; two for Newport, and one for San Francisco.

The following vessels have been used during the year as cruising vessels for apprentices: *Essex*, *Hartford*, and *Monongahela* on the East coast; the *Alert* on the West coast. The movements of these vessels are given in Appendix A.

THE TRAINING OF LANDSMEN.

As Congress has hitherto not appropriated for barracks and other facilities for training stations for landsmen, the Bureau has continued its former policy of using such vessels as could be withdrawn from active duties as floating barracks or receiving ships. The training of landsmen on board of the above vessels and at adjacent places on shore has resulted in fitting them for regular cruising ships. This system can be continued, and though imperfect and unsatisfactory, it possesses the advantage of requiring but small sums of money for the purposes of maintaining good wharf spaces for the ships and clear ground on shore for drills and exercises.

A building at Port Royal Naval Station intended for a sawmill, but not completed, owing to the abandonment of the place as a naval station, was, by permission of the Secretary of the Navy, fitted as a mess hall, dormitory, bath house, and cook house for the accommodation of 300 recruits. As Congress did not appropriate for this station, the recruits have all been withdrawn and the building referred to abandoned.

By the transfer of the *Richmond* from League Island to Norfolk, to be used in conjunction with the *Franklin* at Norfolk, 1,000 recruits can be accommodated there. At this station preliminary instruction is given these green men prior to their transfer to cruising vessels. All has been done that could be accomplished without appropriations for the necessary facilities at this point. Arrangements should be made at Norfolk to accommodate 1,500 recruits.

A station with the necessary receiving ships and small craft for drill should be established at New London or in Narragansett Bay with capacity to accommodate 1,500 recruits.

It is found that in any force of enlisted men not less than 10 per cent of the number must be under training at all times. It is also seen that, since the acquisition of the Philippines and other outlying possessions, a certain percentage of our personnel—not less than 5 per cent—is necessary to allow for men preparing to be transferred from one station to another, for those who have returned to the United States previous to discharge, and for men who having been newly enlisted are awaiting assignment. The number of men now in the Navy and asked for from Congress amounts to 31,000. By 1906 this number should be increased to 40,000, in order to give the 34,000 necessary to man the vessels which will be in commission at that time, and 6,000—the 15 per cent of the total force—under instruction, awaiting transfer or assignment, and en route to or from their ships or stations. The above does not, however, include 10 per cent additional for war basis, or 3 per cent for

sickness, which percentage should be taken into consideration when asking for an increase in the enlisted force.

Allowing 2,400 men to be accommodated at the New London and Norfolk stations, 1,200 at the proposed naval station on the Great Lakes, 900 landsmen and apprentices at the station on the Pacific coast, and 1,500 apprentices at the naval station in Narragansett Bay, we would, if the above facilities were provided, be able to accommodate 6,000 men, namely, 10 per cent, or 4,000 under training, and 5 per cent, or 2,000 awaiting transfers, etc.

The following vessels have been in use as cruising practice ships for landsmen: *Alliance*, *Buffalo*, *Dixie*, *Prairie*, *Lancaster*, *Topeka*, and *Indiana* on the east coast and the *Mohican* on the west coast. The movements of these vessels are given in Appendix A.

Owing to the lack of training ships in the Pacific, landsmen for training have been sent direct from the training station at San Francisco to the *Iowa*, *Wisconsin*, and *Philadelphia*. In fact, every ship in the Navy to-day is a training ship, the battle ships and first rates all carrying in excess of complement landsmen and apprentices who have completed a course in a training ship. Special instruction has been given to the men of the engineer force, and the *Cincinnati* has been used as a training ship for firemen.

THE GUNNERY TRAINING SYSTEM.

The Bureau has continued in operation its plan for the training of seamen to be gun captains. The *Amphitrite* being in need of a general overhauling was placed out of commission on November 30, 1901, and the *Puritan* designated to take her place as a gunnery training ship. The *Puritan* was under repairs during the winter, which interfered considerably with the training of men, but in April the repairs were completed and active work was once more undertaken. A class of about 100 men has been under instruction, and the results have been very satisfactory, both officers and men taking the greatest interest in the development of the class. The *Peoria* has been utilized as a tender to the *Puritan* and has assisted in instruction and target practice with guns of small caliber. The report of the commanding officer of the *Puritan* is appended.

The Bureau has had under serious consideration the question of improving the gunnery practice of the fleet, and an officer, Lieut. Commander A. P. Niblack, U. S. Navy, has been detailed to take charge, under the Bureau, of all matters relating to the improvement of gunnery practice. It is believed that new methods developed under this officer's direction will be followed by good results. To give sufficient practice to officers and men in actual great-gun firing as the sole means of teaching gunnery would involve enormous expenditures of ammunition, the wearing out of guns, and the constant cruising of ships near favorable target practice waters. Happily, in addition to subcaliber practice, which was formerly our main reliance, modern ingenuity has improved machines for teaching aiming and pointing and devices for giving manual dexterity in all the details of handling ammunition, loading, training, pointing, and firing. It is now practicable to teach the elements of gunnery in port, and very cheaply. This instruction must be supplemented by target practice with full caliber ammunition at sea, but with these new mechan-

quently with the General Board on this subject. The Bureau is not at present prepared to make any recommendations concerning the matter.

In conclusion the Bureau invites the attention of the Department to the serious defects inherent in the present system for administering the personnel of the Navy.

To remedy these defects and bring the fleet generally to a high point of discipline and training, there is needed a larger control over the personnel and the organization of the fleet than can be effectively maintained by a single bureau.

Under the direction of the Secretary the Bureau of Navigation is required to administer the affairs of the fleet in preparation for war; to arrange for its organization and mobilization, and for the maneuvers of our own fleet and the study of those of foreign squadrons; to plan for combined operations with the Army; to make, study, and develop war plans; to organize the reserves of men and ships; to direct the War College and Office of Naval Intelligence; to arrange for the complements and details of officers and men, the training of officers and the recruiting and training of men, and to execute all plans of campaign. These are the bare outlines of its duties; the details are of too varied a character to be properly administered with the limited authority now vested in the Bureau.

These duties, necessary to an efficient administration of the fleet, should be grouped in natural subdivisions, with responsible heads working in harmony under a single chief.

To insure this larger control and closer responsibility the methods of a general staff are desirable. Efforts have been made since 1893 to develop such methods, but without legislation by Congress. Up to the present moment a marked success has attended this development, and to-day we see the Bureau of Navigation, General Board, Office of Naval Intelligence, War College, and Board of Inspection and Survey drawing steadily closer together as component parts of a general staff.

We can, however, go no further without Congressional legislation which shall establish a general staff with the control necessary to administer more effectively the affairs of the fleet. There is needed a general staff and a chief of the general staff, who, by direction of the Secretary, shall be responsible for the personnel and the efficiency of the fleet in commission; who shall, in fact, direct, under the Secretary, the military affairs of the fleet and be responsible to him for its condition. A complete plan is prepared, which will require only legislative recognition of the existence of a chief of general staff and the several sections necessary to carry out the various details.

Without such an organization, the power to establish thorough reforms will be lacking.

Very respectfully,

H. C. TAYLOR,
Chief of Bureau.

The SECRETARY OF THE NAVY.

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B.

OFFICE OF NAVAL INTELLIGENCE,
Washington, D. C., September 23, 1902.

SIR: In compliance with the Bureau's order, dated September 18, 1902, I have the honor to submit the following report concerning the operations of the Office of Naval Intelligence for the fiscal year ending June 30, 1902.

During the year the files of the office were overhauled and all material not deemed of present value or historical interest was eliminated. Printed books and pamphlets which were of no value to the office were transferred to the libraries of the Navy and War Departments, the Naval Academy, the Library of Congress, and the superintendent of documents. The books and pamphlets which were required by the office were consolidated into one small book collection, which has been classified by subject and properly catalogued. At least two-thirds of the books and pamphlets belonging to the office were thus eliminated, but they are still available to the office should they be required in the future. The register or general information files, the most important in the office, were divided into a current branch and an obsolete branch. All registered numbers bearing date prior to January 1, 1896, were collected into an obsolete file, while all registered numbers bearing a date subsequent to January 1, 1896, now form the current file. The obsolete and current files are now properly arranged and stowed in separate sections and are immediately available for reference by means of the card-index system. About two-thirds of this material are in the obsolete branch. The reference cards were also divided on the same date line between obsolete and current, and these two divisions of cards are placed respectively with the obsolete or current registered numbers to which they refer.

When the naval appropriation bill was under discussion both before the Naval Committees and in the Senate and House of Representatives, much information in regard to foreign naval progress was furnished to Senators and Representatives on their request.

Translations from foreign languages have been regularly made in this office for the office of the Secretary of the Navy and the Bureau of Navigation, and when required for other bureaus of the Department. The volume of this work is considerable.

The only nonconfidential publication issued by the office during the fiscal year was General Information Series No. XX, Notes on Naval Progress, July, 1901. The edition of Notes on the Spanish-American War is exhausted, but a reprint of 300 copies has been authorized. On April 15, 1902, the Senate passed a joint resolution providing for

the printing of an edition of future volumes of General Information Series for the use of Congress. This resolution is now pending before the House Joint Committee on Printing.

The Chief Intelligence Officer has had under consideration the revision of the system of Intelligence Reports based on the proper point of view throughout. While some advances have been made, the final adoption of the new scheme has been held back awaiting certain developments, the tendency of which will be suggestive as to the improvement of the general scheme.

During the past year the character of the Intelligence Reports has improved, and further improvement is expected.

The naval force of the office at the time of writing this report consists of the Chief Intelligence Officer and the following staff associates: One lieutenant-commander, one lieutenant-commander (on temporary detail in the office of the Assistant Secretary), one lieutenant, one assistant engineer, retired.

It is understood that another officer will be provided.

It is the aim of the office to carry on the work according to the recent policy of the Department; that is to say, to have as much work as possible done by civilian employees.

The hearty reception of the new policy by the office is best shown by the following exhibit of the number of naval officers on duty in the office during a long term of years:

1890.....	13	1897.....	8
1891.....	12	1898.....	7
1892.....	12	1899.....	5
1893.....	7	1900.....	7
1894.....	12	1901.....	7
1895.....	12	1902.....	5
1896.....	10		

The office has the assurance of the Secretary of the Navy that more officers will be provided if it shall appear that the office work is suffering essentially.

The Chief Intelligence Officer desires again to invite attention to the desirability of maintaining its civilian employees permanently in the office, instead of transferring them from time to time to other branches of the Navy and other Executive Departments by reason of promotion.

The circumstances which govern these cases are also applicable to the cases of naval officers serving in the Office of Naval Intelligence. It is the duty of these staff associates to read thoroughly in the whole scope of the world's naval information. Naturally they become more and more valuable to the Department as they progress in their reading and investigations. This suggests the longest possible tours of duty in the office, especially in view of the small number of officers now employed.

The staff of the office on June 30, 1902, was as follows:

Name.	Rank.	Reported.	Duty.
Charles D. Sigsbee.....	Captain	Feb. 1, 1900	Chief Intelligence Officer.
John H. Gibbons.....	Lieutenant-commander....	Nov. 6, 1901	Staff intelligence officer.
Louis M. Nulton.....	Lieutenant.	Oct. 17, 1901	Do.

The following officers were on duty, but detached during the fiscal year:

Name.	Rank.	Reported.	Detached.
Horace M. Witzel	Lieutenant-commander....	Oct. 23, 1900	Dec. 26, 1901
Thomas Snowden	do	Apr. 23, 1901	Apr. 24, 1902
Harry Phelps	Lieutenant	July 18, 1900	Nov. 30, 1901
Sumner E. W. Kittelle	do	Oct. 23, 1900	Dec. 2, 1901
Louis R. de Steiguer	do	May 6, 1900	Aug. 6, 1901
Orlo S. Knepper	Lieutenant, junior grade...	Oct. 8, 1901	Oct. 20, 1901
Charles L. Poor	do	Sept. 2, 1901	May 31, 1902

The following officers are on duty abroad as naval attaches:

Name.	Rank.	Date of present orders.	Attached to—
Richardson Clover	Captain	Jan. 2, 1900	United States embassy, London.
William H. Beehler ^a	Commander	Jan. 24, 1899	United States embassies, Berlin, Rome, Vienna.
Giles B. Harber	do	Apr. 5, 1900	United States embassies, Paris and St. Petersburg.
Charles C. Marsh ^b	Lieutenant-commander.	Oct. 7, 1901	United States legation, Tokyo and Pekin.

^a Will be relieved by Lieut. Commander Templin M. Potts on October 1, 1902.

^b Relieved Lieut. Albert L. Key, December 1, 1901.

Much additional work of a confidential nature, known to the Bureau, has been accomplished during the year.

Very respectfully,

C. D. SIGSBEE,
Captain, U. S. Navy, Chief Intelligence Officer.

The CHIEF OF THE BUREAU OF NAVIGATION,
Navy Department.

C.

No. 340.]

UNITED STATES NAVAL ACADEMY,
Annapolis, Md., July 1, 1902.

SIR: I have the honor to submit my report of the operations and conditions of the United States Naval Academy during the year beginning July 1, 1901, to the present date.

On July 1, 1901, the membership of the several classes of naval cadets was as follows:

First class	63
Second class	54
Third class	72
Fourth class	72
Total	261

And the membership of the classes of midshipmen now at the Naval Academy is as follows:

First class	50
Second class	70
Third class	124
Fourth class	38
Total	282

On August 13, 1901, the first examination of candidates for admission to the Naval Academy was conducted by the Civil Service Commission. It was not compulsory for candidates to take this examination, so that very few of the principals availed themselves of the opportunity, but instead took the regular examination held at the Naval Academy in September. Thirty-seven were examined by the Civil Service Commission August 13, and of this number 6 passed. One was physically disqualified, which disqualification was waived by the Navy Department. In September 121 candidates were examined, and of this number 69 passed.

In the present year all candidates are required to be examined by the Civil Service Commission. On April 15, 75 candidates reported for examination. Of these, 42 were principals and 33 were alternates. Of the principals, 34 passed. Besides these, 4 principals who failed had alternates who passed, making a total of 38 out of 42, or 90 per cent of the possible number. This is the largest percentage of candidates that has ever passed. Many of the alternates had principals whose examination was postponed until August 11, 1902, so that their cases can not be disposed of until the result of the principals' examination is known. Of the candidates that passed in April, 3 were rejected physically, and the disqualifications in 2 cases were waived by the Department.

The practice ships *Indiana* and *Chesapeake*, with the midshipmen of the first, second, third, and fourth classes, made the cruise last summer from June 10 until August 28, the midshipmen having changed ships on July 20. Upon the return of the practice ships all midshipmen, except those who were unsatisfactory in their studies and were allowed a reexamination by the academic board, were granted leave of absence until the beginning of the academic year, October 1, 1901. Those midshipmen who were allowed a reexamination remained at the Academy during the month of September, receiving special instruction each day in the subjects in which they were to be reexamined, the result being that all midshipmen except 2 passed their reexamination successfully and were continued with their respective classes. It is proposed to follow this course with the midshipmen who were found deficient at the last annual examination and who are to be reexamined in September next.

During the year covered by this report, the resignation of 1 midshipman was requested by the Department on account of misconduct, 3 resigned voluntarily, 24 resigned for low standing and for deficiency at the last semiannual examination, and 2 have resigned for deficiency at the last annual examination. One member of the class of 1900, performing service afloat, was killed in action in the Philippine Islands; 1 of the class of 1901, performing duty afloat, died in Cuba, and 1 member of the class of 1902 died at Fort Monroe, Va., while on his annual leave.

The final examination papers of the class of 1900 have been received and the standing is now being made out. So far 2 members of that class have been found physically disqualified for the naval service, 1 of whom has had a special act of Congress passed to have him commissioned an ensign, the other case being still under consideration by the Department. One member of the same class, who has been on sick leave, has been ordered here by the Department for examination.

The battle ship *Indiana*, which has been assigned as a practice ship for the midshipmen during the present summer, together with the U. S. S. *Chesapeake*, sailed on the summer cruise June 9, 1902, having on board the midshipmen of the first, second, and third classes, and also Midshipman G. P. Brown, of the class that has just completed the four years' course, and who, as ordered by the Department, is to go on with the next class, unless at the end of the cruise he should be recommended for graduation by the Superintendent. The midshipmen are to change ships on the 19th of July.

The itineraries of the practice ships, as approved by the Bureau, are as follows:

U. S. S. INDIANA.

Port.	Arrive.	Leave.
Annapolis, Md.....	.....	June 9
Newport News, Va.....	June 14	June 19
Newport, R. I.....	June 26	^a June 30
New London, Conn.....	July 11	July 16
Orient Point, N. Y.....	^b July 18	July 22
New London, Conn.....	July 22	July 26
Portland, Me.....	Aug. 2	Aug. 7
Halifax.....	Aug. 11	Aug. 16
Newport News, Va.....	Aug. 21	Aug. 26
Annapolis, Md.....	Aug. 28	

^a For cruise in Block Island Sound and vicinity.

^b Transfer with midshipmen of *Chesapeake* on July 19.

ters and recitation rooms, to provide for the increased number of midshipmen authorized by Congress July 1, 1902.

The mast for the wireless telegraph station is now being erected.

The work on the foundation of the new quarters for midshipmen, under the contract of the Hoffman Engineering and Contracting Company, has been completed. A contract for the superstructure has been made with Noel & Thomas, of Baltimore, and an extensive plant has been installed by them. The work under this contract has not progressed satisfactorily, due to the inability of the contractors to secure deliveries of face brick. Everything now appears to be in satisfactory shape to make good progress as soon as these brick begin to arrive.

The work on the foundation of the building for the department of marine engineering and naval construction, under the contract of Snare & Triest, has been completed. A contract for the superstructure has been made with the Noel Construction Company, of Baltimore.

The contract with John Miller, of Washington, D. C., for filling, has been annulled, due to his failure to complete on time.

Work has been commenced under the contract of the River and Harbor Improvement Company, for dredging the basin and adjoining water front.

The plans and specifications for the officers' mess have been completed and proposals asked. No award was made under the proposals, as the lowest was much in excess of the amount available for the purpose.

A double house for officers' quarters has been built by day's labor, and fitted up for a temporary residence for the Superintendent.

Under the contract for clearing site, with Shreve & Co., of Baltimore, all buildings have been removed on the property owned by the United States, which was purchased as an extension to the Naval Academy grounds. The bulk of this property only awaits the payments by the United States to be available for immediate work. The last lot to be condemned awaits the approval of the United States circuit court for Maryland, which will be had July 24, 1902.

Work on the armory, boathouse, and sea wall has not progressed satisfactory. The contract time for the boathouse and armory expires July 15, 1902, but the buildings will not be finished by that time.

RECOMMENDATIONS.

I would renew my recommendation of last year, namely, that the standard of physical examination for midshipmen be rigidly adhered to; that the age of admission be changed so that no midshipman should be appointed whose age would be under 15 or over 18 on October 1 of the year he enters the Academy as member of the fourth class; also that the course at the Naval Academy shall be four years, and that the midshipmen shall be graduated as ensigns.

I further renew the recommendation of last year that a practice ship for the use of the midshipmen be constructed. This vessel should be of about 3,000 tons, built of steel, ship-rigged, with modern but low-powered engines.

Very respectfully,

RICHARD WAINWRIGHT,
Commander, U. S. Navy, Superintendent.

CHIEF OF THE BUREAU OF NAVIGATION,
Navy Department, Washington, D. C.

D.

UNITED STATES NAVAL TRAINING STATION,
Newport, R. I., August 14, 1902.

SIR: I have the honor to submit the following annual report for this station for the year ending June 30, 1902:

The number of apprentices under instruction during the year was 2,316. Of this number there were—

At the station June 30, 1901.....	958
Received July 1, 1902.....	1,358
Transferred.....	1,176
Discharged.....	499
Dropped from roll, Bureau's order.....	1
Deserted.....	28
At station June 30, 1902.....	612

Of those received there were from—

U. S. receiving ship Richmond....	123	Cleveland, Ohio.....	8
U. S. receiving ship Columbia....	183	Cincinnati, Ohio.....	21
U. S. receiving ship Vermont.....	93	Dayton, Ohio.....	4
U. S. receiving ship Franklin.....	98	Des Moines, Iowa.....	3
U. S. receiving ship Wabash and recruiting station, Boston.....	155	Sioux City, Iowa.....	2
U. S. S. Topeka.....	30	Denver, Colo.....	3
U. S. training ship Essex.....	5	Louisville, Ky.....	5
U. S. training ship Monongahela....	5	Pittsburg, Pa.....	4
U. S. S. Dolphin.....	1	Scranton, Pa.....	1
Ships United States Naval Acad- emy.....	1	Wilkesbarre, Pa.....	2
U. S. S. Michigan.....	2	Williamsport, Pa.....	3
U. S. receiving ship Minneapolis....	30	Springfield, Mass.....	4
Chicago, Ill.....	239	Worcester, Mass.....	9
Peoria, Ill.....	1	Providence, R. I.....	7
Grand Rapids, Mich.....	6	Newark, N. J.....	3
Detroit, Mich.....	11	Augusta, Me.....	1
Milwaukee, Wis.....	8	Bangor, Me.....	2
Washington, D. C.....	37	Eastport, Me.....	1
St. Paul, Minn.....	22	Bath, Me.....	2
Duluth, Minn.....	3	Portland, Me.....	3
Kansas City, Mo.....	38	Ellsworth, Me.....	3
St. Louis, Mo.....	15	Pensacola, Fla.....	9
Buffalo, N. Y.....	67	New Orleans, La.....	4
Rochester, N. Y.....	14	Nashville, Tenn.....	2
Syracuse, N. Y.....	10	Sioux City, S. Dak.....	1
Auburn, N. Y.....	6	Desertion.....	2
Elmira, N. Y.....	6	Enlistment at station.....	33
Jamestown, N. Y.....	7		
		Total.....	1,358

There were transferred from station to ships:

U. S. training ship Monongahela....	496	U. S. S. Topeka.....	1
U. S. training ship Essex.....	351	U. S. S. Prairie.....	1
U. S. training ship Hartford.....	301	U. S. S. Rainbow.....	1
U. S. S. Alabama.....	5	U. S. S. Alliance.....	1
U. S. receiving ship Columbia.....	4	U. S. S. Buffalo.....	1
Navy-yard, Washington, D. C.....	2	U. S. S. Marietta.....	1
U. S. flagship Kearsarge.....	2	U. S. S. Chesapeake.....	1
U. S. S. Cincinnati.....	1	U. S. S. Massachusetts.....	1
U. S. S. San Francisco.....	1	U. S. S. Olympia.....	1
U. S. receiving ship Wabash.....	1		
U. S. S. Brooklyn.....	1	Total.....	1,176
U. S. receiving ship Franklin.....	1		

K.

OFFICE OF THE COMMANDER IN CHIEF
UNITED STATES NAVAL FORCE ON ASIATIC STATION,
FLAGSHIP BROOKLYN,
Cavite, P. I., February 28, 1902.

SIR: In accordance with the requirements of paragraph *h*; article 280, Navy Regulations, I have the honor to submit the report of this command for the current fiscal year carried up to the end of my term of command on this station, March 1, 1902. Appended are tables of the disciplinary, sanitary, and other data required with this report; but for the sake of greater completeness, as far as this report goes, and to facilitate my successor's continuing it to the end of the fiscal year, the appended data covers only the first six months of the whole period included by the report, except the summary of the employment of vessels, Appendix A, which is carried up to the present date.

ADMINISTRATION.

From the beginning of the fiscal year until July 28, 1901, I was temporarily absent from the limits of the station, returning in the *Brooklyn* from the parliamentary celebrations in Australia. During my absence the senior squadron commander, Rear-Admiral Frederick Rodgers, acted as commander in chief, reverting to the position of squadron commander as soon as he learned of my arrival at Batavia en route to Cavite. I resumed the administration of the command immediately on reaching Cavite, August 7, and as soon as I could regain touch with the situation and make the necessary arrangements the naval force was divided into two squadrons—the Southern, comprising all in the Philippines, including marines and naval stations; the Northern, all outside the Philippines, or, more specifically, all in the waters of China, Japan, and Korea. This division was made in accordance with instructions from the Navy Department and had for its objects the more efficient and uniform administration of each portion of the fleet, the greater freedom of the commander in chief in his movements, and his relief from the mass of details which in so large a command consume more time than their importance warrants and thereby prevent due attention being paid to some of his principal functions.

The senior squadron commander, Rear-Admiral Frederick Rodgers, assumed the immediate command of the Southern Squadron August 27; the junior squadron commander, Rear-Admiral Louis Kempff, of the Northern Squadron August 29.

The instructions to the squadron commanders delegated to them the necessary authority for the proper employment, disposition, maintenance, repair, and inspection of their respective commands, the com-

mander in chief being kept fully informed by frequent periodical reports and exercising only a general supervision and direction. General court-martial affairs are by law confined to the commander in chief only, and to insure greater uniformity and efficiency throughout the entire command, changes in the personnel are reserved to the commander in chief, the squadron commanders being empowered to alter the detail of officers only in emergency and of men only as the best interests of the service may require.

Formerly, when there was but one squadron commander, the naval force in the Philippines was administered a greater part of the time by him, so that as far as the Southern Squadron is concerned, the present plan may be said to have the sanction of nearly two years' trial. The completed arrangement, with two squadron commanders, has now been in operation for nearly six months, and the resulting improvements fully justify the advantages that were predicted for it. From the inspection of vessels alone, the gain in efficiency has been considerable. In a subsequent section of this report, devoted to the subject of inspections, it will be seen how this important means of supervision has until recently been disused, often by force of circumstances, but chiefly, during my administration, through lack of time. The system has also freed me from routine matters enough to give time for a visit to various parts of the station of great and growing importance, a regulation duty to a commander in chief which it has been impracticable for me to carry out until near the close of my term of command. It would be tedious to enumerate the improvements resulting from the division of the details of command between two subordinate flag-officers, and many of the good results would be apparent only to those who are familiar with all the interior workings of the fleet; but they are none the less real.

This division of immediate control is geographically natural, but it should never be allowed to develop a separation of the force into two distinct commands, each under its own commander in chief. The two squadrons are closely allied, yet their local interests are so diverse as to be virtually antagonistic, each always having use for any part of the other's force that can be obtained. A commander in chief of the whole is needed to prevent working at cross purposes, and, with a comprehensive knowledge of the entire station, be able to dispose of the whole naval force so as to meet the whole situation to the best advantage. I feel confirmed in the opinion that the present administrative arrangement is the best one now for this command, and as the naval force increases in size and consequent importance, keeping pace with the growth of the interests and influence of the United States, the responsibility of the commander in chief will not admit of his being diverted by minor affairs from the wide personal knowledge of the situation which he must obtain and the careful study of the large problems he may have to confront.

SERVICE PERFORMED IN PHILIPPINE WATERS.

In the Philippines the period has been marked by the revival of the insurrection in some regions that had not long before been pacified and placed under civil government and by increased activity among the unreconciled Filipino bands. Prior to October, vessels were maintained on the same patrol stations as heretofore, designated by their

respective headquarters, as Vigan, Iloilo, Cebu, and Zamboanga stations. Early in October, however, the gravity of the situation in Samar caused the commander of the Southern Squadron to concentrate about that island as much of the force as could be spared from other parts of the archipelago, and about the same time disturbances in southwestern Luzon and the adjacent island of Mindanao required the constant attention of a large and a small gunboat. Concurrently there were indications of a contemplated uprising in Manila, active operations against the insurgents in Cebu, requiring naval assistance, and rumors of uneasiness in the situation in Mindanao and Jolo. Importations of arms into Jolo and Paragua from Borneo were also reported, but on investigation failed of confirmation.

The naval force has done excellent work in Samar, which has been so long the hotbed of the insurrection. As close a patrol of the coast has been maintained as the number of vessels and dangers of navigation would permit, and the small gunboats have done great service in the rivers. A battalion of marines, under Major Waller, was drawn from Cavite and landed in southern Samar very soon after the outbreak marked by the massacre of a company of the Ninth Infantry at Balangiga. This battalion has performed some very creditable service, notably the capture of an insurgent stronghold at Sojoton, a considerable distance back from the coast.

SERVICE PERFORMED IN CHINESE, JAPANESE, AND KOREAN WATERS.

On the northern station a monitor has been stationed regularly at Canton, leaving there occasionally for target practice or repairs at Hongkong. On account of the extremely trying conditions during the hot season the *Monterey* and the *Monadnock* exchanged places, the former having been about eleven months on the Canton station. So little of a monitor's hull is exposed to the cooling influence of the winds that the heat absorbed from the surrounding water is all retained and becomes a menace to health as well as a serious discomfort at a place like Canton, where the temperature of the river is abnormally high, owing to the inflow of heated water from the shallow canals and rice fields.

As in the previous year, vessels passing up or down the coast have touched in at Swatow, Amoy, and Foochow. The flagship of the commander in chief visited Amoy once, that of the commander of the Northern Squadron twice, making a stay of two weeks on the second occasion. The intermediate coast, also, to the Yangtze River has been visited by several vessels. * * *

At Shanghai a monitor or other vessel has been stationed constantly, with one or more others, either up the Yangtze River or ready to go. The absence of numerous appeals for the presence of a vessel at various points is indicative mainly of a state of quiet, but it also shows a feeling among foreign residents that the provisions for their protection is ample and close at hand. The existing conditions in the Yangtze Valley have not required an American vessel to be stationed at any point on that river; but our vessels have passed up and down frequently, and with the coming of winter the *Helena* and *Wilmington* were prepared for permanent detail up the river if need developed.

For the Gulf of Pechili a vessel was kept at Chefoo, or visiting the

ports of north China and Korea until the middle of December. The *Monocacy* remained at Taku the whole period, wintering in a mud dock as before, and the *Vicksburg* passed the winter at Niuchwang, in company with a British and Russian gunboat. The commander of the Northern Squadron went to Chefoo and Taku and visited Pekin. The commander in chief made visits of a few days at Chefoo and Chemulpo, Korea.

Japan was visited by the acting commander in chief, Rear-Admiral Frederick Rodgers, in July, with the *New York*, *New Orleans*, and *Yorktown*, attending the Perry monument unveiling at Kurihama. Subsequently the *New York* visited Kobe and made a short cruise in the inland sea. In November and December the commander in chief visited Hakodate, Yokohama, Kobe, and Nagasaki, the latter being also resorted to by several other vessels for various purposes. The commander of the Northern Squadron also has lately visited Nagasaki, Kobe, and Yokohama.

The ports of Kyau Chau, Niuchwang, and Dalny were made the special objects of visit by the *New Orleans* for information of the situation at these points. The *Helena* also visited Kyau Chau under stress of weather. Reports on Kyau Chau from both these vessels indicate that vessels are welcomed there, as the Germans wish to build up the commerce of the port.

SPECIAL SERVICES.

Besides their regular employment, vessels have performed special services as follows: The *General Alava* hoisted the flag of the commander in chief temporarily, while the *Brooklyn* was shifting her 5-inch battery, and made a tour of inspection of the southern Philippine Islands. In October, by the Department's order, the *General Alava* was turned over to the sole disposition of the civil government of the Philippines. The *Yorktown*, by the Department's order, conveyed Commander Seaton Schroeder, U. S. Navy, from Guam to Yokohama, and later back to Guam again. Commander Swift was temporarily detached from the command of the *Yorktown* to act as governor of Guam during the absence of Commander Schroeder.

HYDROGRAPHIC WORK.

* * * * *

Aside from a detail of three officers to assist a commander sent out by the Department for the determination of the longitude of various points in the Philippines, there has been no special assignment for hydrographic work. A great deal of information has been obtained from vessels, especially in the Philippine waters, in the course of their cruising. * * *

MARINE BRIGADE.

The marines serving ashore have numbered, officers and men, a few over 1,300, organized into a brigade of two regiments, with headquarters of the brigade and one regiment at Cavite and of the other at Olongapo. The brigade commander was a lieutenant-colonel, until relieved in the latter part of January by a colonel.

The brigade has been distributed, approximately, as follows: Marine barracks, naval station, and in the town of Cavite, from 600 to 400, including outpost at Dalajican. Cavite Province: Bacoar, 54; Paranaque, 47; Novaleta, 24; Rosario, 33; Cavite Viejo, 20; Las Pinas, 32. Subig Bay Naval Reservation, Olongapo, 246 to 100; Subig, 102 to 53; Morong, 30; Isabela de Basilan, 110, and 12 men at Balabac light. Polloc, Mindanao, 50. Malabrijo light, 6. San Bernardino light, 8. Battalion in the field, in Samar, 319.

The posts in Cavite Province were occupied in the latter part of August, there being more marines stationed in Cavite than were needed, and the occurrence of a few cases of bubonic plague making the removal of some of them a desirable measure. It was advantageous, also, in relieving a detachment of the Army for service elsewhere.

In the latter part of October a battalion was sent to Samar; four companies were drawn from Cavite, and partly replaced there by 150 men brought down from Olongapo and Subig. A reinforcement of about 100 men came out from the United States by transport in February and was sent to Olongapo. The Samar battalion was relieved by a detachment of Army troops about the middle of February and divided between Cavite and Olongapo. The strength of the detachments about Subig Bay is being added to for the better guarding of that naval reservation.

At Isabela de Basilan, Polloc, and, until late in September, at Olongapo and Subig, officers of the marine detachments exercised civil functions in addition to their military duties. Except in Samar, the military duties have been merely those of an occupying force and guard without active operations.

The marine battalion in Samar did good work against the insurgents, penetrating a considerable distance inland from the coast and destroying insurgent stores and fortifications, notably at Sojotan. An attempt to march a detachment of 50 men over a trail from Lanang to Basey, Samar, was unsuccessful, the party meeting with great hardships, extreme suffering from exposure and starvation, 10 men being lost on the march and 2 more afterwards dying from its effects.

The sanitary and general condition of all the posts is good, and nearly all, except the light-houses, have been inspected by the commander in chief, the senior squadron commander, and the brigade commander. For the most efficient administration of this brigade, there should be more regular staff officers attached to it, of rank and experience; and an inspector is much needed, so that the rounds may be made with the frequency desired.

INSPECTIONS

This very important function of a flag officer has received during the past six months more of the attention due to it than was possible before the present squadron organization was instituted; and marked improvement in the efficiency of the ships is sure to follow. I look upon frequent inspections as being more necessary on this station, where the vessels are generally separated, than it is on other stations, where vessels are frequently in company and have the stimulus of visible competition.

Appended, marked "H," is a list of inspections held, with the date

of previous inspections noted, showing how much this powerful measure for increase of efficiency has been in disuse.

A special limited form of inspection is made of small gunboats by a senior officer present, and has an excellent general effect. Auxiliary vessels of the fleet and others temporarily on the station have also been inspected by officers detailed.

The naval stations and hospitals have been inspected by the commander in chief, squadron commanders, and informally, from time to time, by senior officers present, and the brigade commander has made a tour of inspection among the outlying posts. In the latter part of February, the quartermaster of the Marine Corps reported on the station, with orders from the commandant of the Corps to make an inspection of all marine posts, to report on their condition and needs.

Early in September the commander in chief found it practicable for the first time to make a fairly comprehensive round of the station. The *General Alava*, as temporary flagship, was used to visit Iloilo, Zamboanga, Isabela de Basilan, Polloc, Cebu, Catbalogan, Romblon, and Olongapo. Returning aboard the *Brooklyn*, and sailing from Cavite September 26, a few days were spent in Nagasaki, Chefoo, Chemulpo, Vladivostok, Hakodate, and a month at Yokohama overhauling the *Brooklyn's* machinery. A week was spent at Kobe, two at Nagasaki, and ten days at Woosung, with a few days at Amoy, on the way to Hongkong for docking, returning to Manila February 13.

Although Batavia, Java, lies outside the ordinary course of cruising vessels attached to this station, the visit there should be mentioned—a few days in the latter part of July, principally for coal—on the return passage from Australia. It would have been desirable to make a longer stay, but time did not permit.

PERSONNEL.

Throughout the period covered by this report there have been many vacancies in the enlisted complements of vessels, especially in petty officers' ratings. Special instruction is given to qualify men for advancement to fill some of the higher ratings, but with only partial success, and the artificer ratings, requiring skill and training, have not been appreciably helped thereby.

Changes in vessels' crews, due to casualties, to the necessity for equalizing the deficiencies, as far as possible, among all the ships, and to sending short-time men home, have been very numerous, although every effort has been made to minimize them. The general condition in this respect is better now, however, than it has been for several years past, because nearly the entire crews of some of the vessels are made up of men that will complete their term of service at the same time.

There have been many drains on the number of officers of the fleet without corresponding replacement, which has resulted in reducing many vessels below their proper complement. The marine brigade is also many short of the number required.

STRENGTH AND COMPOSITION OF THE FLEET.

Neglecting the few days in July during which several vessels under orders home still remained on the station, the regular force of the fleet

in these waters has not been changed throughout the period of this report, except in the number of auxiliary gunboats in commission. The fleet comprises—

Battle ship.....	1
Armored cruisers.....	2
Monitors.....	2
Protected cruiser (sheathed).....	1
Gunboats, third rate (3 sheathed).....	11
Gunboats, fourth rate (2 composite).....	16
Gunboats, fourth rate, not commissioned.....	4
Transport and light-house tender, now at disposal of civil government.....	1
Tugs, seagoing, armed.....	2
Refrigerator ships (naval complement).....	2
Tank steamer (merchant complement).....	1
Distilling ship and collier (merchant complement, but a naval lieutenant and a pay officer on duty aboard).....	1
Dispatch vessel (same system until February, then put on full merchant complement).....	1
Collier (same system until February, then put on full merchant complement)...	1
Colliers (merchant complement).....	2

SUMMARY.

Men of war of regular type.....	17
Auxiliary gunboats, 16, plus 4 not commissioned.....	20
Auxiliaries with naval complements.....	5
Auxiliaries with merchant complements.....	6
Total.....	48

The *Solace* is the only vessel that has come to the station for the exchange of men and officers; the colliers *Ajax* and *Cæsar* have each brought one cargo of coal and stores; and the collier *Justin* attached to Guam, has made two trips, once for supplies for Guam, once for repairs.

CONDITION AND REPAIRS OF VESSELS.

The *Don Juan de Austria*, *Princeton*, *Yorktown*, *Helena*, *New Orleans*, *Wilmington*, *Iris*, *Nanshan*, *Saturn*, and *Zafiro* have had repairs of more than routine extent at ports outside the Philippines; there has been not so much loss of any one vessel's services through long overhauling as was the case last year with two or three vessels. More of this repair work has been done at Hongkong than at any other port, and this is considered to be the most favorable place, in facilities as well as situation, for repairs to Southern Squadron vessels that can not be done at Cavite, notwithstanding the recent discontinuance of the Hongkong pay office and superintending naval constructor. Uraga and Nagasaki, Japan, the former only newly tried, afford additional facilities for the Northern Squadron, ample for all needs except docking the largest vessels. Work done at Shanghai has given less satisfaction, there being no competition, but it has the advantage that a vessel lying there, although her machinery may be disabled, is still a protection to the community and can release a vessel in cruising condition for assignment elsewhere.

Generally speaking, the vessels of the fleet are in good serviceable condition, and the two monitors are in much better shape than they have been for some time. Exception must be made of the *Isla de Cuba*, *Isla de Luzon*, *Don Juan de Austria*, and the small ex-Spanish gunboats. The three named vessels are kept going only by frequent

repairs, but are useful in the Philippines. Lack of proper care in former hands and rapid corrosion while sunk left them too badly deteriorated to be fully restored. The *Isla de Cuba* stands now in need of extensive overhauling, less than two years since her reconstruction. The *Manila* also needs thorough repairs, and is only awaiting her relief, the *Rainbow*, to sail for the Puget Sound Naval Station.

The small gunboats are indispensable to the Philippine work, and their present unsatisfactory condition is due to the wear and tear of hard cruising and none too competent or experienced men in charge of their machinery. Their officers deserve great credit for their unremitting efficient service in spite of the difficulties peculiar to the class of vessel and nature of their work. Their most serious troubles are with the boilers, nearly all of which are old and badly worn, but with new boilers and repairs to hulls as needed vessels can be kept in service for some years longer.

The *Mindanao* and *El Cano* are approaching completion and promise to be valuable additions to the Southern Squadron.

The *Monocacy*, it seems hardly necessary to say, is unseaworthy, as she has been for many years. How much longer she will be able to do river service can not of course be predicted, but she is still very useful.

CAVITE NAVAL STATION.

The repair plant at this station has been considerably enlarged and improved, and such increase of facilities is still going on. Work up to the plant's full capacity is practically in hand all the time. The number of workmen employed has averaged about 2,000, the same as last year. Specific recommendations have been made for the betterment of accommodations for officers, their present quarters being entirely inadequate, as reported in some detail last year.

The great difficulty with the quality and rapidity of the work continued to be lack of sufficient supervision, skilled white foremen and leading men being proportionately more necessary here than in the United States.

The whole of the former Spanish naval reservation on Sangley Point has been placed under the commandant's jurisdiction; all trespassing forbidden and prevented. Storage space for considerably more than 20,000 tons of coal, with a wooden pier for convenience in landing it, is located near the outer end of Sangley Point. An excellent range for small-arm target practice has been constructed on the northern side of the reservation, and the former Spanish hospital grounds have been set apart, by order of the Department, as the site for a new naval hospital in place of the unsuitable building now in use within the navy-yard walls.

OTHER NAVAL STATIONS.

In addition to the large supply of coal at Sangley Point there is a coaling station at Isabela de Basilan, now in process of repair, consisting of a shed of about 3,500 tons capacity and a wharf, alongside which the cruising vessels of the southern squadron and colliers will be able to load or discharge. This is situated on the island of Malamaui, opposite the town of Isabela, on what was formerly a Spanish naval reservation. Isabela is the station of a detachment of marines,

from which a small guard is maintained at Balabac light. There is also a former Spanish hospital, repairs to which have been authorized to preserve it for use as a regular naval hospital.

At Polloc, Mindanao, there is a detachment of marines which guards the coal store and wharf and administers the civil government of the town. About \$4,300 has been allotted to restore the small dry dock and machinery plant to serviceable condition, which will make this station very convenient for the small gunboats and save many a trip to Cavite for repairs. The coaling facilities and habitations at Polloc are completed, but the newly authorized work has been delayed, no suitable person to take charge of it being available. A civil engineer, additional to one for Cavite alone, has been asked for, and would have much to do at outlying stations.

At Olongapo no work is in progress, except for the preparation of information for the Department board on that naval station. A large detachment of marines, under a lieutenant-colonel, guards the reservation, and it is intended to assign Commander William Swift, as soon as practicable, to command the reservation, as the future importance of this place to the Navy requires careful management of all its affairs from the outset.

A small supply of coal is maintained at Olongapo, for gunboat use, and there are small deposits also at Salomague and Sual, on the Lingayen Gulf. Coal has also recently been landed at Cebu, near the spot recommended for a naval coaling station.

The subject of coaling stations and reservations for various naval purposes in the Philippine Islands was gone into personally by the commander in chief, and the matter given careful consideration during an inspection trip among the islands. The most suitable locations at Iloilo, Isabela de Basilan, Polloc, Cebu, Olongapo, Sangley Point, and at the mouth of the Imus River, Cavite Province, were carefully delineated and described in a special report. Of all the secondary stations Cebu is the most central and important to the Navy, especially for cooperating with the Army.

The importance of having ample facilities of our own for all the vessels of this fleet is so great that I feel justified in again urging that the construction operations at Olongapo be undertaken at an early date; and that to expedite the work and insure it against costly mistakes and delays the employment of Chinese labor be expressly authorized and that civil engineers be engaged who are experienced in local conditions of labor and climate.

SUPPLIES.

As far as practicable, vessels have been held down to obtaining supplies from the Cavite naval station; but on the northern station there must be, of course, more frequent recourse to open purchase, a matter that is largely beyond the control of the commander in chief where ships are widely scattered, as the duty performed on this station requires.

The discontinuance of the purchasing pay office in Hongkong is a distinct loss, and its restoration is recommended. The establishment of one in Manila is what has long been needed, adding also to the efficiency of the pay department of the Cavite station, by dividing between two the duties formerly performed by one pay officer.

The supply of coal to the fleet is on a much more satisfactory basis than it was two years ago. In the Philippines, between colliers and coal piles, there is rarely, if ever, any necessity for a vessel to buy coal or go far to get it. On the coast of Samar, where many vessels at a time have been stationed for some months, a collier has been maintained constantly.

On the northern station it is deemed best to buy coal in Japan, except at Yokohama, as the Japanese Government, though making no trouble, is still undecided about allowing our ships to coal freely in their ports from our own colliers. In the Gulf of Pechili it is often advantageous to send our own colliers, as far as cost alone is concerned; but the troubles that have arisen with the crews of these vessels make this, as a general practice, of doubtful wisdom. The same applies to other ports of the China coast and to the Yangtse Valley. At Hongkong it has often been arranged to coal vessels from colliers going to that port for docking or repairs.

At Yokohama the coal depot of 12,000 tons capacity recently established has been used by several vessels to our advantage, coaling in that port being a frequent occasion of dispute with the contractor.

DISCIPLINE.

The discipline of the command has been very good. The number of general court-martial cases has been for the same period of time about the same as last year; of summary court-martial cases, slightly less; but the character of offenses has been on the whole less serious. The punishment given to the participants in the outbreak on board the *Manila* a year ago has had a marked effect for good.

TACTICAL EXERCISES AND MILITARY DRILLS.

There have been none of these, outside the routine for single ships, except as reported in Appendices F and G. The requirements of duty of the fleet have not permitted assembling ships for any evolutions or exercises in squadron.

SANITARY CONDITION.

The general health and sanitary condition of the fleet and station have been good. There has been some grippe, and the usual amount of dengue fever; malarial disease has not been prominent. There were a large number of cases of syphilis and other venereal diseases; 21 per cent of the whole number of men invalided to hospital and from the service were from disability due to this cause. Two cases of bubonic plague appeared in the marine battalion at Cavite station; both recovered and there was no further extension of the disease. Four cases of smallpox occurred in Cavite near the end of January, but all recovered; there was no spread of the disease, and the quarantine restrictions on communication with Cavite, which were established January 26, were removed February 23. There were a number of cases of typhoid fever, but the mortality was small. The disease was due to causes exterior to the ships, being contracted on shore. German measles appeared in one of the ships while in dock at Nagasaki, and there was one death from pneumonia following an attack of the disease.

That there was little or no dysentery among the crews of the various ships is due to the exclusive use of distilled water for drinking and careful supervision of vegetables brought on board for food. The food of the men has been good. At the larger stations in the Philippines the supply of fresh beef and mutton periodically brought up from Australia by refrigerator ships has been very profitable hygienically.

The supplies of medicines and surgical appliances have been ample and of good quality. It would be well to have more of the ships and detached stations supplied with microscopes, which are not only useful but almost necessary aids in the determination of the character of diseases, especially those liable to affect men on this station.

Attention is invited to the large number of men "invalided" for causes which existed prior to enlistment, amounting to 20 per cent.

HOSPITALS.

The naval hospital at Yokohama, Japan, has been greatly improved and increased in capacity by its recent addition, and will be in even a better condition when the contemplated repairs to the old building are completed. From its situation in a more bracing atmosphere, it has been very useful as a sanitarium for those who can not recuperate in the debilitating climate of the Philippines.

The naval hospital at Cavite station, located in the midst of the active part of the navy-yard, is working under great difficulties, which can be obviated only by change of location. A tract of land at Canacao, just outside of Cavite, has been set apart as a location for a hospital, and the Surgeon-General has included in his estimates the sum of \$50,000 to erect and furnish the same.

The appearance of bubonic plague at Cavite called attention to the lack of facilities for combating epidemics of contagious disease and led to the erection, at an expenditure of \$5,000, of a small pest hospital at Canacao, sufficient to meet any ordinary emergency. Its usefulness was soon demonstrated on the outbreak of smallpox among the officers and families attached to the station. These cases were very well taken care of, and all recovered. The equipment of this pest hospital includes six hospital tents complete, for further accommodation in case of a severe epidemic.

The old Spanish hospital at Isabela de Basilan is to be repaired, at an expenditure of about \$2,000 gold, and used as a naval hospital. The building is getting badly out of repair, but its arrangement and location are good, and the authorized outlay will check further deterioration and make a very useful establishment for the marine detachments and vessels on the Zamboanga station.

Patients belonging to ships stationed at Hongkong and Shanghai requiring hospital treatment have been well cared for at the general hospital and the British naval hospital at those places.

GUAM.

By the January trip of the *Solace*, returning to the United States, reliefs were sent for all officers at that station for whom the naval governor requested reliefs, excepting a major of marines, to relieve whom no one could be spared.

During the absence from Guam of the governor, Commander Seaton Schroeder, U. S. Navy, Commander William Swift was temporarily

detached from command of the U. S. S. *Yorktown* and acted as governor from August 11 until November 17. The *Yorktown* conveyed Commander Schroeder to and from Yokohama and Guam.

The collier *Justin*, attached to Guam, visited the station in September for supplies, which were purchased in Yokohama, and again later for docking and repairs, stores, and coal. The collier *Pompey* was sent to Guam in October to land coal.

APPENDICES.^a

Appended are: (A) Employment of vessels; (B) Coal consumed and its cost; (C) Target practice, including torpedo practice; (D) Enlistments, discharges, punishments; (E) Percentage of sick, deaths, invalids, and sanitary condition; (F) Military drills; (G) Tactical exercises of single ships; (H) Inspection of vessels.

Very respectfully,

GEO. C. REMEY,

Rear-Admiral, U. S. Navy, Commander in Chief.

The SECRETARY OF THE NAVY,

(Bureau of Navigation),

Navy Department, Washington, D. C.

UNITED STATES FLAGSHIP NEW YORK,

Yokohama, Japan, August 28, 1902.

SIR: In accordance with paragraph *h*, article 280, United States Navy Regulations, I have the honor to submit the following military review of this command for the period March 1 to June 30, 1902, that part of the fiscal year ending March 1 having been reported on by my predecessor in the chief command, Rear-Admiral George C. Remy, U. S. Navy. Appended hereto are reports from the squadron commanders and the commandant of the naval station, Cavite, P. I., and tables of data required with this report.^a These latter, together with the summary of the employment of vessels, cover the entire fiscal year.

By direction of the Navy Department I relieved Rear-Admiral George C. Remy, U. S. Navy, of the chief command on March 1, 1902. On February 28 Rear-Admiral Frank Wildes, U. S. Navy, arrived at Yokohama, where he relieved Rear-Admiral Louis Kempff, U. S. Navy, and having proceeded in the *Kentucky* to Cavite, assumed command of the Southern Squadron on March 8. The U. S. S. *Rainbow* having arrived at Cavite, Rear-Admiral Wildes shifted his flag to that vessel on April 7, and the *Kentucky* immediately rejoined the Northern Squadron. Rear-Admiral R. D. Evans, U. S. Navy, assumed command of the Northern Squadron April 28, with the *Kentucky* as flagship.

ORGANIZATION AND ADMINISTRATION.

Since August, 1901, the naval force on this station has been divided into two squadrons—the Southern, comprising the force in Philippine waters, and the Northern, comprising all the force on the station outside the Philippines. There has been a commander in chief in com-

^aNot printed.

mand of the fleet, and a flag officer in command of each of the two squadrons. The instructions from the commander in chief to the squadron commanders delegated to them much of the authority of the commander in chief, but the general supervision and direction of affairs, administration of the personnel, important questions relative to the repairs of ships, and the authority for convening general courts-martial are retained by the commander in chief.

After an experience on this station as senior squadron commander and as commander in chief, I have no hesitancy in stating my opinion that whatever may be the theoretical advantages claimed for the present system of administration, the practical disadvantages that constantly confront and embarrass the squadron commanders, as well as the flag officer in chief command, are so numerous and so important that it would be conducive to better administration, more prompt dispatch of business, better discipline and better results generally were the system changed to one in which there were only two flag officers on the station, one as commander in chief of the naval forces and shore stations in the Philippines and the other as commander in chief of what is known as the Northern Squadron.

The division of this station into two distinct and independent commands, each under its own commander in chief, is a natural one geographically and politically. The Philippines must be regarded as a home station rather than a foreign one, and the interests of the Government in the Philippines are in no way identified with either our own or those of foreign governments in China and Japan.

The character of the forces and the nature of the duties in the two squadrons as at present constituted are necessarily different. The Philippine Squadron consists of a number of gunboats engaged in patrolling the archipelago, and all the vessels of this squadron, except the *Rainbow* and some of the larger auxiliaries, can be docked and repaired at Cavite. Since the Department's decision as to the Philippine service the necessity for sending these vessels out of the archipelago for the benefit of the health of officers and crew no longer exists.

Turning now to the Northern Squadron, the *raison d'être* of the squadron is based on two important considerations: First, river and harbor service for the protection of our interests in China, and second, a cruising squadron to constitute our effective mobile naval force in the Far East.

For the first service the monitors *Monterey* and *Monadnock* and the gunboats *Wilmington* and *Helena* are peculiarly well adapted; for the second, the *Kentucky*, *New Orleans*, *Yorktown*, and *Vicksburg* are efficient cruising vessels. In this connection I may state that I intended to assign the *Yorktown* to the Northern Squadron at an early date.

Since the Northern Squadron is comprised mainly of vessels of such size and type as to be unsuitable for Philippine service, and the vessels best adapted for work in the Philippines are not suitable for service in China and Japan, the distinction between the two squadrons is apparent.

With the sole exception that vessels of the Northern Squadron depend to a certain extent upon the Cavite naval station for coal and supplies, there is nothing in common between it and the Southern Squadron. Only three vessels of the Northern Squadron can possibly

be docked at Cavite, and it is obviously inexpedient that these vessels should be sent from the Northern Squadron to dock in the Philippines when the work can be more satisfactorily done in Japan or in China.

As the naval station at Cavite is the only base of supplies that we now possess in the Far East, it should serve equally for both squadrons and should be conducted upon the same system followed at navy-yards in the United States, thereby relieving the commander of the Philippine Squadron of a large amount of work in connection with supplies and repairs that now tends to occupy his time and hamper his movements.

For the able and efficient administration of naval affairs in the Philippines the flag officer in command must not only be familiar with the islands and their internal affairs, but he must be in close touch with the insular authorities, both civil and military, and should be free to cruise and, if necessary, direct in person such military operations as may become necessary from time to time. Under the present system, at conferences between the chief civil, military, and naval authorities on questions touching these three branches of the Government the Navy is frequently placed at a disadvantage, owing to the fact that its representative is almost invariably an officer in chief command, and therefore not, as a rule, empowered to act unless specially authorized to do so by the commander in chief.

Owing to the magnitude of the present station and the diversity of its interests, the commander in chief, often absent from the Philippines for a considerable period, must necessarily leave the administration of affairs in the archipelago to the judgment and discretion of the flag officer in command there. On the other hand, while in the Philippines the commander in chief must leave the administration of the northern part of the station to the Northern Squadron commander. From the foregoing it naturally follows that the squadron commanders must necessarily be better informed generally and better able to act promptly on questions pertaining to their respective commands than a third flag officer who is frequently out of touch with the squadrons.

The question of communication is a most important one, and the delay and confusion resulting from the transmission of mails from the Department to the squadron commanders (through the commander in chief) constitutes one of the greatest objections to the present system. It is obvious that business between the squadrons and with the Department could be greatly expedited and simplified if done direct. Under the present conditions cabling must be depended upon to a considerable degree to expedite important business.

The administration of discipline, assembling of boards, etc., is hampered for the reasons given above. From the fact that the commander in chief, who may be in northern China, can alone order a general court-martial to convene in the Philippines, and that afterwards the record must be submitted to him for final consideration, it is apparent how delay is frequently incurred, involving unnecessarily long confinement of the accused.

Other objections to the present system of administration are, that the commander in chief rarely has commanding officers under his immediate observation for a sufficient length of time to enable him to judge their fitness; and the detailing of officers and men on distant parts of the station is often embarrassing and could best be done by

the squadron commanders. The number of flag officers on this station, particularly with the comparatively small force we have had in China and Japan, is liable to be confusing to other nationalities. During the past year four United States rear-admirals have visited the principal Chinese and Japanese ports.

It may be argued against the proposed system that in time of war it might become necessary to mobilize the entire force for operations on the coast of China or at some other point of the station, but on the other hand it may be said that in time of war the naval force in the Far East would be greatly augmented, that vessels could at any time be ordered from one squadron to the other, and that various other changes in any other scheme of organization that might be suggested would become necessary.

Briefly speaking, then, and for the foregoing reasons, it is recommended that the Asiatic Station as now constituted be separated into two distinct commands, the China Squadron and the Philippine Squadron, each with its own commander in chief.

Composition of the fleet.

Vessel.	Class.	How utilized.
New York.....	Armored cruiser	Flagship of commander in chief.
Kentucky.....	Battle ship	Flagship of Northern Squadron.
Rainbow.....	Station ship	Flagship of Southern Squadron.
Monterey.....	Monitor	Northern Squadron.
Monadnock.....	do	Do.
New Orleans.....	Protected cruiser.....	Do.
Wilmington.....	Gunboat, third rate	Do.
Helena.....	do	Do.
Vicksburg.....	do	Do.
Monocacy.....	do	Do.
Yorktown.....	do	Southern Squadron.
Annapolis.....	do	Do.
Princeton.....	do	Do.
Manila.....	do	Do.
Don Juan de Austria.....	do	Do.
Isla de Luzon.....	do	Do.
Isla de Cuba.....	do	Do.
Frolic.....	Gunboat, fourth rate (in commission),	Do.
Quiros.....	do	Do.
Villalobos.....	do	Do.
Pampanga.....	do	Do.
Paragua.....	do	Do.
Samar.....	do	Do.
Urdaneta.....	do	Do.
Arayat.....	do	Do.
Calamianes.....	do	Do.
Albay.....	do	Do.
Panay.....	do	Do.
Mariveles.....	do	Do.
Basco.....	do	Do.
Elcano.....	Gunboat, fourth rate (not in commission),	Do.
Callao.....	do	Do.
Mindanao.....	do	Do.
Cardoqui.....	do	Do.
Leyte.....	do	Do.
Manileno.....	do	Do.
Mindoro.....	do	Do.
Piscataqua.....	Armed tug	Do.
Wompatuck.....	do	Do.
Glacier.....	Refrigerating ship.....	Do.
Celtic.....	do	Do.
Arethusa.....	Tank steamer	Do.
Zafiro.....	Dispatch vessel.....	Do.
Saturn.....	Collier.....	Do.
Nanshan.....	do	Do.
Pompey.....	do	Do.
Iris.....	Collier and distilling vessel.	Do.
General Alava.....	Transport (in service of civil government).	Do.

The *Manila* sailed for the United States April 15, and the *Rainbow* arrived at Cavite April 3, 1902. The *Pampanga* was put out of commission June 19 and the *Samar* commissioned the same date.

Having in view the large naval forces maintained in Asiatic waters by other important powers, and the fact that our interests in the Far East will in the future be second to none, I believe that in addition to the monitors and small vessels for river service the United States should have a strong homogeneous force in Chinese waters suitable for cruising in company and consisting of at least two battle ships and two large cruisers.

DUTIES PERFORMED IN CHINESE AND JAPANESE WATERS.

Affairs in China have continued quiet and the service of our naval force in Chinese waters has been of a peaceful nature. The *Monterey* has been stationed at Shanghai, and the *Monadnock*, owing to the epidemic of cholera at Canton, has remained at Hongkong in readiness to resume her station at Canton if necessary. The *Helena* has been employed in the Yangtze River, and the *Wilmington* has visited the principal ports from Taku on the north to Amoy on the south. The *Monocacy* has remained at Taku, leaving that place only for a steam trial and target practice. The *Kentucky*, flagship of the Northern Squadron, has visited Yokohama, Kobe, and Nagasaki, and the *New Orleans*, with the exception of a visit to Chemulpo, has cruised in Japanese waters until the latter part of June, when that vessel, accompanying the *Kentucky*, left Japan for a cruise in the Gulf of Pechili.

During the period of this report I, in the flagship *New York*, have visited the following ports in China and Japan, Hongkong, Amoy, Woosung, Chefoo, Taku, Nagasaki, Kobe, Uraga, and Yokohama. Leaving the flagship at Taku, I visited the United States minister at Peking, and upon the request of Minister Conger was granted an audience by the Emperor and Empress Dowager of China. At Tokyo I was received in audience by the Emperor and Empress of Japan, and it is a pleasure to report that in both instances my reception was marked by most cordial expressions of friendship for the United States.

DUTY PERFORMED BY SOUTHERN SQUADRON.

As a result of the capture of Lukban, the insurgent leader in Samar, the general defeat of the insurgents, and the close blockade of the island prohibiting the ingress of food supplies, hostilities in Samar ceased early in March with the declaration of an armistice, and on April 24 General Guevarra, who had succeeded Lukban in the chief command, all the principal officers and about 700 men of the insurgent forces surrendered at Catbalogan and turned in their arms. The prisoners, after taking the oath of allegiance to the United States, were transferred to the vicinity of their homes. The success of the campaign in Samar was undoubtedly due more to the cutting off of the enemy's supplies than to any other cause, and in this the services performed by the small gunboats were conspicuous.

Affairs in the lake region, island of Mindanao, assumed a serious aspect in March, when a small squad of the army engaged in exploring was attacked by Moros and one man killed. This trouble led to several small engagements by the Army and culminated in the storm-

ing and capture of one of the strongest Moro forts at Bayan, on Lake Lanao. The Mindanao patrol was reenforced by several small gunboats, but, owing to the fact that the disturbances were principally in the interior, the naval force did not at any time engage the enemy; however, their presence undoubtedly exercised a deterrent effect upon the coast population.

In addition to the services performed on the coasts of Samar and Mindanao, a patrol has been maintained in the Sulu group, and frequently visits of gunboats have been made to other parts of the archipelago.

In general, affairs in the Philippines are in a very favorable condition, and disregarding the scattered bands of ladrones and the restless state of some of the island and isolated tribes, the pacification of the islands may be said to be an accomplished fact; whether this pacification is more than temporary is a question as yet unsolved.

Throughout the period covered by this report the cooperation of the Army and Navy has been most cordial and effective.

SPECIAL SERVICE IN THE PHILIPPINES.

The *Celtic* and the *Glacier* have adequately maintained the service for the supply of fresh beef and mutton to the Army and Navy in the Philippines, and during the period of this report each of these vessels has supplied a cargo.

The naval transport *General Alava* continues under the control of the civil government of the Philippines.

In this connection I beg to renew my recommendation to the Department that the naval officers and crew be withdrawn from that vessel if she is to continue on duty under the civil government, as officers and men can not well be spared from regular service.

The *Annapolis* has completed a survey of the harbor of Pollock, Mindanao. The *Pampanga* and *Urdaneta* have assisted in the survey work of Olongapo.

The *Wompatuck* and the *Piscataqua* rendered valuable service in floating the U. S. army transports *Hancock* and *Wright* and have in many ways proved most valuable vessels in connection with our force in the archipelago. The *Wompatuck* has been put on regular service between Cavite and Olongapo.

The *Zafiro*, employed as a supply vessel and transport, has, by making monthly trips through the archipelago, proved of great benefit to the squadron.

HYDROGRAPHIC AND INTELLIGENCE WORK.

A considerable amount of intelligence duty in connection with naval ordnance and target practice has been performed by the fleet intelligence officer and inspector of target practice, and some important reports have been made by officers attached to vessels of the fleet.

In addition to the survey and hydrographic work performed by the *Annapolis* at Pollock, much valuable hydrographic data has been furnished by some of the gunboats in the Philippines when the duty upon which they were engaged permitted.

TACTICAL EXERCISES.

Owing to the character of the duty required of the Southern Squadron it has been impracticable thus far for vessels of that squadron to cruise in company or engage in tactical exercises. In the Northern Squadron, consisting of one battle ship, one cruiser, two monitors, and three gunboats, the radical difference of type, the indifferent cruising qualities of the monitors, the fact that two gunboats were required for river work, and also that the *Kentucky* and *Vicksburg* have been under repairs a part of the time covered by this report, have operated to prevent a mobilization of the squadron for tactical exercises. In June the *New Orleans* began cruising in company with the *Kentucky* and they will be joined by two or more gunboats as soon as practicable for the purpose of carrying out much desired squadron maneuvers.

TARGET PRACTICE.

During the three months covered by this report target practice has been conducted in accordance with the regulations for target practice prescribed in Gun and Torpedo Drills for the United States Navy, 1900. Two vessels, the *Kentucky* and *Isla de Luzon*, have completed the course of gunnery instruction under General Order, No. 9, of September 18, 1900.

Full reports of this target practice have been forwarded from time to time to the Department. Recent target practice on this station, particularly that held in accordance with the Department's General Order, No. 9, has proved of the greatest importance in showing the desirability of a more perfect system of training gun pointers and in suggesting improvements in ordnance. The personnel of the fleet is showing a healthy and zealous interest in this subject and it is confidently expected that greatly increased efficiency may be attained in the near future.

PERSONNEL.

The condition of the personnel of this command has not been entirely satisfactory. The shortage in officers and the large number of vacancies in the higher ratings of enlisted men, together with numerous changes, have rendered it difficult to maintain the required state of efficiency of the ships and shore stations of the station.

While every effort has been made to minimize the number of changes of officers and enlisted men, it has been found impracticable to obtain that permanency of complement so desirable and so necessary to the highest efficiency in a man-of-war. Frequent and extensive changes under the present system are made necessary by the fact that officers and men are transferred to the United States after two years' service in the Philippines or three years in the Northern Squadron. Ships returning to the United States are given complements of short-time men, and a considerable number of men are lost to the station through the necessity of sending home men condemned by medical survey and through desertions, etc. Vacancies in the fleet have been filled to the best advantage by men, usually of the lower ratings, sent to this station by the *Solace* and *Buffalo*. Under this system it is obviously impracticable to avoid frequent changes, all the more so as the present plan

of relieving men after two years' service in the Philippines is deemed most necessary.

It is respectfully submitted that the plan as outlined below would effectually solve the problem and would be entirely feasible.

A vessel sent to this station should carry a complement of long-time men, who should not be transferred out of this ship during her stay on the station except for most urgent reasons. Vacancies in the ship's complement due to casualties should be filled by men from the station ship at Cavite or from home. After two years' service in the Philippines or three years in the Northern Squadron that ship should be relieved by another from home and sent to the United States or to another station. Ships of a special type which it is desirable to keep on the station indefinitely should have their complete relief crews sent out by transport or other conveyance and exchanged for the home-going crew.

The advantages of keeping the same crew in a ship throughout a cruise are so numerous and so obvious that a discussion on the subject would be superfluous. It is urgently recommended that the above plan of relieving ships and their crews be instituted. The question of personnel and its thorough training is undoubtedly one of the most important, if not the most important, question relative to this command at the present time, and it is earnestly hoped that the above or some other practicable method of keeping ships' crews intact may be decided upon.

COALING STATIONS IN THE PHILIPPINES.

The question of coal supply for the vessels of the fleet has been solved in a satisfactory manner. The main point of supply is on Sangley Point, near Cavite, where at the end of the fiscal year nearly 50,000 tons were on hand. An unsatisfactory feature of this station is that shallow water prevents near approach, making it necessary to handle all coal, whether from colliers or to vessels of the fleet, in cascoes or lighters. Under present conditions rapid coaling is impracticable for more than one large vessel at a time. In this connection the cost of handling coal is a considerable item. Preparations are under way for the erection at this place of the new coaling plant, which will greatly increase coaling facilities.

The total amount of coal on hand at the end of the fiscal year was 49,447 tons. During the year there was delivered to ships 52,074 tons, and to the naval station, tugs, etc., 3,537 tons; during the same period there was received from the United States 93,766 tons. The amount paid for handling coal was \$39,763.81.

In addition to the Sangley Point station there are small stations at Isabela de Basilan, Polloc, and Cebu.

The repairs to the station at Isabela have been practically completed. Colliers and vessels of the squadron can discharge or load alongside the wharf. The capacity of the shed is about 3,500 tons.

The station at Polloc consists of a wharf and shed, with a capacity of about 370 tons, and is intended for the supply of small gunboats only.

At Cebu only a small supply is kept for emergencies. At this place the site claimed by the Navy for a coaling station has for some time been claimed by both the naval and military authorities, with the result

that navy coal was temporarily stored elsewhere. An early solution of the question is anticipated, after which a wharf and shed will be necessary here.

With the main coal supply at Cavite, a small supply at Cebu, in the central part of the archipelago, and the stations at Polloc and Isabela in the south the requirements are in my opinion fully met. Experience has proved that a collier is more desirable than a stationary supply for vessels operating in the south; especially is this the case when the collier, like the *Iris*, combines the feature of collier and distilling ship.

COAL FOR NORTHERN SQUADRON.

Vessels in northern waters are dependent for coal upon the United States naval coal depot at Yokohama, navy colliers, and purchases from dealers. The Yokohama depot has a capacity of 12,000 tons. Whenever practicable vessels of the Northern Squadron coal at Yokohama or from navy colliers. A collier is habitually stationed in the vicinity of Woosung.

COLLIERS.

The colliers *Iris*, *Nanshan*, *Saturn*, and *Pompey* have been constantly employed in connection with both squadrons. These vessels, with the exception of the *Iris*, are officered and manned under the merchant shipping laws. The *Iris*, having a large distilling plant and good cargo capacity, has been found to be the most useful supply vessel of the fleet. In order to make her complete as a tender to gunboats a small cold-storage plant and tools for repair work have been installed on her main deck. These changes are nearly completed, and that vessel now combines the features of a collier, distilling ship, and supply vessel. However, the cold-storage capacity is small, there being but two 1-ton ice machines available for that vessel.

NAVAL STATIONS.

The naval station at Cavite does not, in its present state, adequately serve its purpose as our principal naval base in the Far East. From the point of view of capacity alone it meets the requirements of the naval force in the Philippines in most particulars, but, of course, the absence of any docking facilities for vessels larger than the *Villalobos* is sadly felt, especially as the only marine railway in the Philippines capable of taking the larger gunboats is the one at Canacao, which is not under the control of the Government, and where the work done on naval vessels is often unsatisfactory and the charges exorbitant.

Considering the requirements of a naval base for the entire Asiatic fleet, I do not regard it feasible to construct and equip a station at Cavite except at a cost out of all proportion to the value of the natural advantages of that place. The disadvantage of vulnerability in war, shallow water, sanitary and climatic conditions are so well known as to require no discussion, while, on the other hand, I know of no single important advantage that it possesses over the neighboring port of Olongapo.

The annual report of the commandant of the naval station at Cavite, appended hereto,^a shows the scope of the work done. Considering the

^a Not printed.

inferior capacity of Filipino workmen and the small number of officers and American leading men employed at the station, the results achieved may be regarded as quite satisfactory. The commandant's recommendation for the installation at Cavite of an electric light and power plant and a distilling and ice plant with cold storage is approved; also the recommendation that a new ferryboat for service between Cavite and Manila and an ammunition lighter should be provided.

At the present time there are no suitable quarters available for officers permanently attached to the naval station, either in the navy-yard or in the town of Cavite, and it is therefore impracticable for an officer to have his family in Cavite. Even should houses be provided for officers attached to the station, the sanitary conditions are such as to make residence there undesirable as compared with the station at Olongapo, where the climate and sanitary conditions are excellent for the Philippines.

The commandant's suggestion that the magazines and shell rooms should be removed from the limits of the navy-yard is approved and recommended, as the possible damage to life and property, in the event of a magazine explosion under present conditions, is very great. In this connection no suitable site is available in Manila Bay comparable with the sites at Olongapo, where the Navy possesses the land necessary.

While the removal of the magazines, the installation of a power plant, and other improvements are regarded as necessary, it is recommended that expenditures for this purpose be reduced to a minimum consistent with necessity, with the view to the ultimate abandonment of this station in favor of a new station at Olongapo.

Owing to the fact that no appropriation has yet been made for the construction of a naval station at Olongapo, nothing beyond a fairly comprehensive survey of the site has been done toward the development of the station.

Following the issuance of the Department's General Order, No. 67, embodying an Executive order setting aside certain territory in the provinces of Zambales and Bataan as a naval reservation, Commander U. R. Harris, U. S. Navy, was assigned to duty as naval governor of the reservation and commandant of the naval station at Olongapo, and as such has had immediate control of everything relating to naval affairs in the reservation. A force of about 375 marines under the command of Lieut. Col. O. C. Berryman, U. S. Marine Corps, occupying posts at Olongapo, Subig, and Morong, has effectually protected the reservation against ladrones and have insured tranquillity.

I take this opportunity to urgently recommend that an appropriation be again asked of Congress for the building of a naval station at Olongapo. In my opinion the appropriation asked for should be moderate and the building of the station should be progressive, beginning with one dock capable of taking our largest battle ships, and shops and storehouses with a capacity for our present needs only; but all work should be done in accordance with a comprehensive general plan looking toward the future requirements of our naval force in Asiatic waters. The urgent need of a dry dock capable of taking our largest vessels is referred to in another section of this report.

Beyond the repairs to the coaling station at Isabela de Basilan (mentioned elsewhere in this report) nothing has been done toward putting the old Spanish naval station at that place in repair to fit it for the use of our vessels.

At Polloc, island of Mindanao, preparations have been made to repair the small dock at that place and to install a repair shop with a capacity for repairing small gunboats. The importance of this place as a sub-base is due to the long distance of the southern Mindanao coast from Cavite. At the present time there is no great need of a station at Pollok, but in the event of future hostilities, necessitating the presence of a number of gunboats in the southern part of the archipelago, a base at either Isabela or Pollok for supplies and where minor repairs could be made would be of the greatest importance.

DOCKING FACILITIES.

The urgent necessity for a dry dock in these waters capable of taking our largest vessels has been much impressed upon me by facts which have actually presented themselves during the past year.

Hongkong has the only private dry dock accessible for the *Kentucky*, and the health conditions existing there during the summer season, to say nothing of the exorbitant prices, render it undesirable at times. In certain emergencies this dock would be unavailable. Last year as a courtesy the Japanese Government offered me the use of the Government dock at Kure to dock the *New York*. At that time it was not certain that the private dock at Uruga, Japan, had sufficient capacity to take the *New York*.

In May of the present year the Japanese Government acceded to a request for permission to dock the *Kentucky* at Yokosuka, and about the same time the *New York* was docked at Uruga, it having been found by close inspection that that dock was barely wide enough.

It appears, therefore, that independent of the courtesy of the Japanese Government, our largest ships must depend upon Hongkong without regard to conditions of climate, health, and prices.

This condition of affairs points to the necessity for our own dry dock in Oriental waters. The Philippine Islands being our only possessions in the East, naturally the required dock should be located within that group, and I do not hesitate to affirm that there is no question as to the proper location. Olongapo was the place finally selected by the Spanish authorities for their principal naval station in the East, and the surveys and close investigation made by officers of our Navy have shown beyond a doubt that Olongapo is the best place in the archipelago for a large Government dry dock.

CONDITION OF VESSELS—REPAIRS.

In general the condition of vessels of this fleet is good, the exceptions being in the cases of the *Monocacy*, the *Isla de Luzon*, and some of the small gunboats which have seen much hard service in the Philippines. Up to the end of the period covered by this report it was found impracticable to withdraw vessels from Philippine service to effect repairs as frequently as was desirable. The smaller gunboats, which were in poor condition when received from the Spaniards, have been employed to the limit of their endurance. The bottom plating of some of these gunboats is badly corroded, and in some the boilers are worn out and will have to be renewed, as has been done in several instances.

The *Monocacy* has deteriorated to such an extent that she can no longer be regarded as seaworthy, and, in my opinion, it would not be

advisable nor safe to send her to the nearest dockyard (Nagasaki) for repairs. I recommend that she continue at her present station, at Taku, during the coming winter and that next spring she be sold and struck from the navy list.

The boilers of the *Isla de Luzon* are in bad condition and will soon have to be replaced. The *Princeton* will shortly require repairs which will withdraw that vessel from active service. The *Isla de Cuba* has recently undergone extensive repairs at Hongkong, and the *Don Juan de Austria* has been repaired at Uraga, Japan.

SANITARY.

The health of the United States naval force on the Asiatic Station during the past year has been good. The percentage of sick and the number invalided have been about the same as heretofore, and the diseases recorded have been of the character usually occurring at the different places where the force has been stationed. The crews of the vessels *Vicksburg* and *Monocacy*, which were literally frozen in during the whole winter, did not suffer from the exposure; indeed, had better general health than those not so exposed.

The number of deaths during the last six months was augmented by 12 which resulted from famine in the Samar expedition, making a total of 39, of which 22 were marines.

Epidemic disease has existed in all the ports on the station, with perhaps the exception of Japan, which is efficiently protected by an intelligent and active quarantine supervision.

Bubonic plague is epidemic throughout the Philippines and southern China, but no cases occurred among our forces. There were very few cases of dysentery, and those were confined to marines stationed on shore, where they are not so well protected from infection as those living in the ships.

One lieutenant of marines, 4 privates, and 1 warrant machinist died of epidemic cholera, but all contracted the disease while stationed on shore.

Upon the announcement of the presence of cholera in Manila on March 22, 1902, the medical officer of the Cavite Navy-Yard at once advised with the commandant as to the precautions necessary to protect the people of the naval station from infection, and proper instructions were issued concerning care in eating and drinking, personal cleanliness, and the usual sanitary procedures. A "disinfecting chamber" for disinfecting clothing and other material was erected in the navy-yard at a cost of \$500, which was allowed from the emergency fund by the Navy Department.

Up to July 1 only one case had occurred in the yard, and that was the case of a native who had contracted the disease elsewhere. About the middle of June cholera appeared among the natives living in the barrios of Olongapo and Subig and at once assumed epidemic proportions. No cases occurred among the naval and marine forces.

From the beginning of the epidemic in the latter part of March, 1902, to July 1, 1902, there were recorded 11,742 cases, with 8,846 deaths, in Manila and adjacent provinces. It is more than probable that there were a large number of cases and deaths which were never recorded.

In view of this fact and also that epidemic cholera has existed along the rivers in China where our ships have been cruising, there is good reason for congratulation that the naval force has so far escaped infection, and the medical and commanding officers deserve great credit for the efficiency of their preventive efforts.

During the winter and spring scarlet fever, in a virulent form, prevailed at Shanghai; a number of our ships were exposed by being stationed there or visiting the port from time to time in the regular course of duty, but all escaped infection.

The condition of the hospitals on the station is about the same as at last report. The repairs and additions to the hospital at Yokohama have been completed and its usefulness is being demonstrated daily.

The withdrawal of the small gunboats having taken away the naval contingent, and the marine post at Isabela de Basilan being so small, the necessity for a hospital establishment at that place has ceased to exist and the present hospital could with propriety be reduced to the regular sick quarters of a post.

The pesthouse at Canacao is in good condition and ready for use.

The hospital in Cavite Navy-Yard is in its usual condition. The installation of electric lighting would greatly increase the comfort of the patients, besides adding to the efficiency of the administration.

The naval medical storehouse at Cavite has continued to supply necessary medical stores to the ships on the station.

Respectfully,

FREDK. RODGERS,

Rear-Admiral, U. S. Navy,

Commander in Chief U. S. Naval Force, Asiatic Station.

THE SECRETARY OF THE NAVY,

Navy Department, Washington, D. C.

L.

U. S. FLAGSHIP KEARSARGE, FIRST RATE,
Navy-Yard, New York, N. Y., September 18, 1902.

SIR: The annual report of the North Atlantic fleet for the fiscal year ending June 30, 1902, during which period the fleet was under my command, is herewith submitted.

I have the honor to report that during this period the battle ships *Kearsarge*, *Alabama*, and *Massachusetts* have been actively engaged in cruising, except for about two months last autumn and this last spring, which were spent at the New York Navy-Yard in necessary repairs. The *Machias* and *Marietta* have done very arduous and creditable duty regarding the interests of the United States on the Isthmus, in Venezuela, and in Haiti. There should be more gunboats for this duty. The *Olympia* joined the fleet in April, but has had to spend two months since then at a navy-yard, though only just commissioned and having been thoroughly overhauled and repaired. The *Indiana* was with the fleet for about two months, but her lack of speed was a great disappointment when it was desired to have fleet maneuvers. I have to reiterate my recommendation that the boilers of this vessel should be renewed. At present she would be relegated to duty as a coast-defense vessel in case of war instead of forming one of the line of battle.

The periods spent at the navy-yards could have been shortened by at least two weeks if surveys for repairs could have been held in the fleet and the repairs in accordance with these surveys begun immediately upon the arrival of the vessels at the yards.

The summer of 1901 was occupied with fleet tactics, target practice with great guns and small arms, and operations in Nantucket Sound in establishing a "naval base." The fleet tactics were necessarily of an elementary kind, as there were only three ships. It developed then, and has been more forcibly demonstrated since, that our systems of signaling are not satisfactory and the fleet tactics not comprehensive enough. I understand that both these subjects are receiving the attention of the Department and the War College. The target practice with great guns at a hulk demonstrated that our marksmanship was not up to a proper standard. The conditions of this practice were severe, but it had a most beneficial effect in emphasizing to the whole Navy the necessity of improving the gunnery practice in accordance with the able recommendations of Lieut. Commander W. S. Sims, U. S. Navy. It appears that the present system for training gun pointers will give excellent results. The operations in Nantucket Sound settled satisfactorily the possibility of quickly landing guns from the ships as large as 6-inch caliber in order to occupy and defend a naval base, and this could be done with the appliances on board ship. The marines and bluejackets were encamped and engaged in scouting and attacking

an enemy not definitely located, and repelling attacks. Also small-arm target practice was engaged in, showing the necessity for regular small arm ranges for the use of the Navy. The most important fact of all was established that there is a good, safe channel across Nantucket Shoals for large draft vessels, and was demonstrated by the battle ships passing through the channel by having a few additional buoys placed. The strategical value of such a channel at this place on our coast can not be overestimated. The buoys, or a certain number of them, should be permanently located to define the channel.

The winter cruise of 1901-2, from December 1 to May 1, was made in the West Indies; visiting several ports, making a complete circuit of the Caribbean Sea. This constant cruising required frequent coal-ing, and interruptions of routine, to the detriment of any progressive system of drills and instructions. The month of January was spent at Culebra, but the beneficial effects of this period were neutralized by the necessity of carrying out General Order, No. 9; yet, this clearly demonstrated that this system of training gun pointers is not sufficient to the needs of the service, nor applicable to cruising ships. The fleet should not arrive at Culebra before the beginning of the dry season, which is about the 1st of January.

Fleet tactics were engaged in during the trips between ports and the beneficial effects were very noticeable, yet the best results could not be obtained owing to the necessity of following the itinerary laid down. Several new fleet maneuvers, submitted by the Department, were performed by steam launches first, then by the ships, and some were very good, while others were not favorably reported upon. It is by such trials in actual practice that fleet tactics can be properly evolved. Experience shows, most decidedly, that the present fleet drill book is too elementary for the needs of the service, as it only includes the simplest movements and does not go beyond double column.

A new system of training of enlisted men by "progressive instruction" was instituted after having carried out the provisions of General Order, No. 9 in regard to training gun pointers. It is still in force and is giving very good results.

The fleet upon its arrival from the West Indies was met off the capes of Chesapeake Bay by the general board and inspection board. Two weeks were occupied in a very comprehensive scheme of target practice and inspection of ships. The target practice was held under the new scheme now in operation. It was not all that could be desired, but showed a great improvement over the work of the previous summer, and in an individual case, like the forward turret of the *Kearsarge*, in charge of Lieut. J. M. Poyer, U. S. Navy, the practice was most excellent, breaking world records for rapidity of fire and accuracy for 8 and 13 inch guns.

Our experience and information from abroad shows that the training of gun pointers should be more systematic, continuous, and comprehensive, and, above all, the frequent transfers of men should be avoided; also that changes should be made in our gun mounts and sights. The elevating gears give too slow a movement, and the training and elevating should be done by different individuals. The cross wires of the telescopes are too large, and a separate sight is required for the gun trainer.

It would seem that our Navy is behind on the question of wireless telegraphy. The Army used it successfully in the late maneuvers.

I understand that experiments are being made at shore stations to get best system. It is believed that experiments at sea on board the ships of the North Atlantic Fleet should be carried on at the same time. It may be found after all the experiments on shore that the system found best there will not be suited to sea conditions, and such experiences have been too frequent to be disregarded. Also, a greater number of officers and men would become familiar with the general principles of wireless telegraphy, and be that much more advanced. The sooner wireless telegraphy is introduced into the Navy the sooner it will be practically developed.

The frequent changes of officers and men of the ships, with the accompanying uncertainty, create a spirit of unrest which is detrimental to discipline and efficiency. Among the men there is no doubt that it is a cause of a certain number of desertions, but the majority of the desertions are due to the greater number of raw recruits being enlisted. Sea life is an acquired habit and many tire of it during its acquisition, especially in these days when the "romance of the sea" has been destroyed by modern fighting machines. The messing arrangements and the ration, lately improved, are about all that could be asked for, and I am satisfied that in no navy are sailors afloat better paid or better fed and cared for than in our own.

The fleet should have colliers, supply and repair vessels, and hospital ships sufficient to its needs. The mobility of a fleet depends upon a regular and prompt coal supply. This can not be accomplished with colliers under an independent control. Supply and repair vessels contribute to comfort and economy, therefore to efficiency, and arrangements for caring for the sick are obviously necessary. In peace the conditions should approach as nearly as possible to war conditions, and these auxiliaries are certain to be attached to a fleet in time of war. Their efficiency depends upon their use and development during peace. The success of coaling at sea and many other lessons were taught by the Spanish war. What are we leaving to be learned by another war? It is obvious that we should leave as little as possible.

I inclose reports from the *Kearsarge*, *Alabama*, *Massachusetts*, *Olympia*, *Brooklyn*, and *Machias*.^a The report from the *Marietta* will be forwarded when received.

Very respectfully,

FRANCIS J. HIGGINSON,
Rear-Admiral, Commander in Chief
U. S. Naval Force on North Atlantic Station.

The SECRETARY OF THE NAVY.

^a Inclosures not printed.

M.

U. S. FLAGSHIP WISCONSIN,

At Sea, en route to San Francisco, Cal., September 13, 1902.

SIR: In accordance with article 280, paragraph *h*, United States Navy Regulations, I have the honor to make the following military review of my command and its operations during the fiscal year ending June 30, 1902:

On July 1, 1901, the Pacific Squadron was composed of the following vessels: *Iowa* (flagship), *Wisconsin*, *Philadelphia*, and *Farragut*.

The following changes in the squadron were made during the fiscal year:

Iowa.—Flag transferred to *Wisconsin* August 12, 1901. Detached January 16, 1902.

Concord.—Assigned to squadron October 2, 1901.

Wheeling.—Reported to commander in chief at San Diego, Cal., April 2, 1902.

CHARACTER OF WORK PERFORMED.

Iowa.—July 1 to 23, 1901, at Port Angeles, Wash., for target practice, drills, and exercises. July 23 to August 3, at Puget Sound Navy-Yard. August 3 to 9, visited Everett, Anacortes, and Port Townsend, Wash. August 9 to 13, at Puget Sound Navy-Yard for coal. Owing to the revolution existing in the United States of Colombia it became necessary to send the *Iowa* to Panama for the purpose of protecting American interests and to preserve the integrity of the transit across the Isthmus of Panama. August 13 sailed for Panama, stopping en route at San Francisco, Cal., and Acapulco, Mexico, for coal, and arriving at Panama on September 7, 1901. On November 22, 1901, owing to conflicts between the Liberals and Government forces along the line of railway, which interfered with the free transit of the Isthmus, the *Iowa's* battalion was landed at Panama, and the trains were conducted across the Isthmus under guard. Temporary peace having been restored, the battalion was reembarked on December 3 and 4. The *Concord* having arrived at Panama on November 23 to relieve the *Iowa*, that vessel left for Talcahuano, Chile, on December 12, and arrived at that place for docking on December 27, having stopped en route at Callao, Peru. On January 16, 1902, the *Iowa* was detached from the squadron under my command.

Philadelphia.—On July 1, 1901, the *Philadelphia* was at Honolulu, H. I., on a cruise to Pago Pago, Samoa, with supplies for the naval station at that place and a relief crew for the *Abarenda*. Arrived at Pago Pago July 13. Departed July 24, and arrived at San Francisco on August 15, having stopped en route at Honolulu. The month of September and until the middle of October was devoted to cruise of

the Naval Militia of the States of Oregon and California. October 18 to December 9 at Mare Island, Cal., undergoing repairs. December 9 to 20, in San Francisco, Cal. Left San Francisco on December 20 for Panama to relieve the *Concord*, arriving at Panama January 6, 1902. The *Philadelphia* remained at Panama or in that vicinity until March 4 protecting American interests. On the 4th sailed for Guayaquil, Ecuador, for the purpose of showing the flag, arriving off that port the 9th. Left on the 16th for Panama and arrived on the 20th. Remained at Panama protecting American interests until June 29, when sailed for San Francisco, Cal.

Farragut.—With the exception of the time from March 3, 1902, to April 11, 1902, which time the *Farragut* cruised to San Diego and return, she has, during the entire year, cruised in the vicinity of San Francisco, Cal.

Concord.—The *Concord* was assigned to the squadron under my command on October 2, 1901. Remained at Mare Island, Cal., from October 2, 1901, to November 1, 1901, undergoing repairs. November 1 to 6 at San Francisco, preparing for cruise to Panama to relieve the *Iowa* at that port. Sailed on 6th for Panama, arriving on November 23. The *Concord's* battalion was landed on the 25th to assist the forces from the *Iowa* in preserving the integrity of transit of the isthmus, and was reembarked on the 3d of December. Remained at Panama until January 9, when sailed for San Francisco, Cal., arriving the 29th. Placed out of commission at the navy-yard, Mare Island, Cal.

Wheeling.—The *Wheeling* reported to the commander in chief at San Diego, Cal., on April 2, 1902, for the purpose of proceeding to Pago Pago, Samoa, as station ship at that place. After having been inspected by the commander in chief, she proceeded to Pago Pago via Honolulu, arriving on the 24th of May, 1902.

Wisconsin.—July 1 to 23, 1901, at Port Angeles, Wash., carrying out a series of drills and exercises. July 23 to October 14 at the Puget Sound Navy-Yard, Bremerton, Wash., undergoing repairs, when sailed for Pago Pago, Samoa, via Honolulu, to investigate the conditions existing in Samoa, arriving on November 5, 1901. November 20 and 21 visited Apia, Samoa, and sailed on 21st for Honolulu, arriving December 1. Sailed on 11th for Acapulco, Mexico, arriving the 25th, for coal. Sailed 28th for Callao, Peru, arriving on January 7, 1902. On the 14th sailed for Valparaiso, Chile, arriving on the 20th. Remained until February 6, when sailed for San Diego, Cal., stopping en route at Callao, Peru, Acapulco, Mexico, Pichilique, Mexico, and Magdalena Bay, Mexico, arriving at San Diego, Cal., on March 25, 1902. Left San Diego April 3, 1902, arriving at San Francisco, Cal., April 5, 1902. Sailed for Port Angeles, Wash., May 24, arriving May 28. June 4 left Port Angeles, Wash., for navy-yard, Puget Sound, Bremerton, Wash., arriving same day.

During the visit of the *Wisconsin* to Chile and Peru the Presidents of those countries received the commander in chief and staff and also visited the *Wisconsin*. Appropriate honors were accorded in both cases, and it is a pleasure to report that in both instances a very marked friendliness was shown toward us personally as well as a desire to impress upon us the high regard in which our country is held.

The general condition of efficiency of the ships has been good. The Department's instructions relative to target and torpedo practices have been carried out with good results.

The sanitary condition of the command has been good. During the visit of the *Wisconsin* to Samoa measles broke out on board that vessel, and in view of the fact that the natives of Samoa are very susceptible to that disease, the ship was kept in quarantine during the visit.

Copies of detailed reports from the commanding officers of the *Wisconsin*, *Philadelphia*, and *Farragut* are appended, marked, respectively, "A," "B," and "C,"^a and give a summary of enlistments, discharges, desertions, courts-martial, petty punishments, percentage of sick, number of deaths, and number sent to hospitals and invalided home for each vessel. Detailed reports from the *Iowa*, *Concord*, and *Wheeling* are not obtainable.

I again beg to call the attention of the Department to the necessity of increasing the squadron in these waters. Constant troubles at Panama during the entire year has necessitated the presence at that port of one of our vessels. Owing to the small number of vessels in the squadron, the work has devolved chiefly upon the *Iowa* and *Philadelphia*, and has necessitated long stops in an unhealthy locality. At least four vessels of the *Boston* or *Bennington* class should be attached to this squadron, so as to allow of frequent reliefs and changes to a northern latitude for recuperation of the personnel of the vessels. It is also desirable that there should be a ship available each year to visit various ports in Central and South America and island possessions for the purpose of showing the flag and protecting the interests of our citizens.

Very respectfully,

SILAS CASEY,
Rear-Admiral, U. S. Navy,
Commander in Chief U. S. Naval Force, Pacific Station.

The CHIEF OF BUREAU OF NAVIGATION.

^a Not printed.

O.

U. S. NAVAL FORCE ON EUROPEAN STATION,
 FLAGSHIP ILLINOIS,
Chatham, England, August 22, 1902.

SIR: In compliance with article 280, United States Navy Regulations, I have the honor to submit the following report for the fiscal year ending June 30, 1902:

Rear-Admiral B. J. Cromwell, U. S. Navy, was in command of the station from July 31, 1901, until his detachment on February 9, 1902, when the command devolved upon Capt. Joseph E. Craig, U. S. Navy, the senior officer present. On May 18, 1902, I arrived at Naples, Italy, with the flagship *Illinois*, and assumed the command of the station on that date.

The vessels assigned to the station during the fiscal year have been the *Illinois*, *Albany*, *San Francisco*, *Chicago*, and *Nashville*. From April 15, the date of the arrival on the station, until July 1, 1902, the *San Francisco* was acting under confidential orders from the Navy Department.

Operations of the vessels of the squadron, with coal consumption and cost thereof, have been as follows:

Illinois.—At New York until April 30, then proceeded to European Station with commander in chief. Arrived at Ponta Delgada, Azores, May 9, coaled and left for Naples, Italy, May 10, arriving on the 18th. At Naples until May 28, then proceeded with *Chicago* and *Albany* to Castellammare, Italy, for drills and official inspections. On June 12, left Castellammare for Southampton, England, to take part in coronation review, calling at Gibraltar, en route, for coal. Left Gibraltar June 13, arriving at Southampton June 17. At Southampton until June 24, then proceeded to Spithead for naval review. Left Spithead on June 29 for Gravesend, arriving there on June 30.

Amount of coal consumed, 3,179 $\frac{1}{2}$ $\frac{1}{4}$ tons, costing \$14,326.40.

Albany.—Left Cavite, P. I., July 3, 1901, en route to European Station, calling at Singapore, Colombo, Ceylon, Seychelles Islands, Aden, Suez, and Ismailia, Egypt, arriving at Port Said September 13. Reported arrival on station on September 13, and on September 15 left for Genoa, Italy, to join commander-in-chief, arriving on September 22. At Genoa until November 22, making repairs and awaiting supplies from the United States. Sailed for Villefranche, France, on November 22, remaining at this port until January 12, 1902, then proceeded to Genoa, remaining until January 18. On January 18 left for Piræus, Greece, with squadron, arriving January 23. At Piræus until February 1, then proceeded to Palermo, Sicily, under full power, natural draft, steam trial, arriving February 3. Awaiting *Rainbow* with draft of men and stores for vessels of the squadron and U. S. S. *Dixie* for transfers of men to United States until February 24, when pro-

ceeded to Algiers, Algeria, arriving February 27. Left Algiers for Genoa on March 6, to receive stores from United States. On March 17 left Genoa for Villefranche, France, for duty in connection with wireless-telegraphy experiments. On May 12 proceeded to Genoa for stores, and May 15 left Genoa for Naples to meet commander in chief, arriving on May 16. On May 28 proceeded to Castellammare, Italy, for official inspection by commander in chief. On June 7 left Castellammare on cruise, visiting Gibraltar, Lisbon, Portugal, and Cherbourg, France, arriving at Cherbourg on June 30.

Amount of coal consumed, $4,942\frac{2}{3}1\frac{1}{2}$ tons, costing \$36,595.94.

San Francisco.—The ports visited by this vessel since her arrival on the station, are Gibraltar, April 15; St. Vincent, May 2; Monrovia, May 12; Cape Mount, May 27; Trade Town, May 29; Monrovia, May 30; St. Vincent, June 8; Madeira, June 19; Southampton, July 1.

The amount of coal consumed was $1,438\frac{4}{5}1\frac{5}{16}$ tons, costing \$9,289.16.

Chicago.—Left Rio de Janeiro, Brazil, July 7, 1901, for European Station as flagship of Rear-Admiral B. J. Cromwell, U. S. Navy, called at St. Vincent, Cape Verde Islands, and Funchal, Maderia, for coal, en route, arriving at Gibraltar July 31. On August 3, proceeded to Southampton, England; left Southampton on August 20 for Portsmouth, remaining at Spithead until 21st, arriving at Portsmouth same date. In dock until September 7, thence to Gibraltar to meet *Culgoa* to make transfers of sick and short-time men. On September 12 left Gibraltar for Genoa to meet remainder of squadron, remaining until October 15; thence proceeded on cruise to Naples, calling at Leghorn, en route; arrived at Naples November 1. November 6, went to Castellammare di Stabia to witness the launching of the Italian battleship *Benedetto Brin*, and on November 7 proceeded to Genoa. Left Genoa for Villefranche on November 21. On December 6, left Villefranche for Genoa, returning to Villefranche on 13th; held night target practice en route. At Villefranche until 27th; went to sea for target practice, returning to Villefranche same day, and remaining at that port until January 12, 1902. Proceeded to Genoa in company with *Albany* and *Nashville*, remaining until January 23, thence with squadron to Piræus, Greece. On February 1, left Piræus for Palermo, Sicily, under full power, natural draft, speed trial, arriving February 3. Remained at Palermo to await arrival of *Rainbow* and *Dixie* to make transfers of men and stores, and on February 13, proceeded to Naples, Italy. On February 17, proceeded to Algiers, Algeria; remained at that port until March 25, making repairs and retubing condensers. Proceeded on cruise and engaged in record target practice off El Bibam, Africa, then calling at Augusta, Sicily; Syracuse, Sicily, Messina, where she was docked; thence to Brindisi, Ancona, Venice, and Trieste, Austria. Left Trieste May 11 for Naples to join commander in chief. On May 28 proceeded to Castellammare, maneuvers en route, and upon arrival was inspected by commander in chief. On June 7 left for Gibraltar to await arrival of *Buffalo* with naval cadets and stores for squadron. On June 17 proceeded to Havre.

The amount of coal consumed was $7,759\frac{1}{2}1\frac{3}{4}$ tons, costing \$51,866.

Nashville.—Left Cavite, P. I., on July 3, 1901, in company with *Albany*, for European station, calling at Singapore, Colombo, Seychelles Islands, Aden, Arabia; Suez and Port Said, joining the flagship at Genoa, September 22. Remained at Genoa for repairs until November 25, then went to Villefranche, remaining at that port until Janu-

ary 12, 1902. Left Villefranche on cruise with squadron, calling at Genoa, Piraeus, Palermo, Algiers, thence to Genoa for stores, arriving on March 9; Villefranche, March 17 to April 8; Genoa, April 9 to 13, during which time the ship was docked, bottom cleaned and painted, and stores for *Albany* received on board. At Villefranche, April 13 to May 22; Genoa, May 22 to 29; Leghorn, May 29 to June 1; Naples, June 2 to 6; Gibraltar, June 12 to 19; Tangier, June 19 to 21; Tunis, June 25 to 29. Arrived at Tripoli July 1.

The amount of coal consumed during the fiscal year was, 3,242 $\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{4}$ tons, costing \$26,209.45.

The general condition of the vessels has been very good. The *Illinois* has required no repairs since her arrival on the station. The *Albany* is in excellent condition in all departments; being sheathed, this vessel does not require the semiannual docking for the purpose of cleaning and painting bottom. She was last docked at Hongkong, China, in January, 1901. The *Chicago's* condition is good with the exception of the spar deck, which requires recalking, especially aft. This deck has not been calked since last commissioning, December 1, 1898—not imperative; in all other respects good. The *Nashville* is in good condition. This vessel received extensive repairs to boilers, pumps, etc., at Genoa, Italy, in October, 1901, and was last docked at the same place on April 19, 1902.

Immediately after assuming command of the station, I made an official inspection of the *Albany* and *Chicago* at Castellammare, Italy, in June, 1902. These vessels were found to be in an excellent condition as regards cleanliness and efficiency at drills, both being maintained at a high standard. No opportunity has offered to inspect the *San Francisco* and *Nashville*, as the former was acting under the Department's orders, and the latter being on a cruise in the eastern Mediterranean, while the flagship *Albany* and *Chicago* proceeded northward.

The exercises and drills on all the vessels of the squadron were in accordance with the regulations. Target practice was held as follows:

Illinois.—May 16, 1902, two sea practices off the island of Sardinia. No opportunity has occurred for small-arms practice on shore. Sub-caliber practice has been held almost daily at sea.

San Francisco.—Had one sea practice during the fiscal year. While anchored at Monrovia, Liberia, almost daily exercises were held at subcaliber practice.

Chicago.—Six practices were held during the year, as follows: July 30, October 15, and December 27, 1901; February 12, May 14, and June 19, 1902. One night practice was held on December 12, 1901, and one record practice on March 28, 1902.

Albany.—Four sea practices were held during the year, as follows: October 19 and December 31, 1901; February 27 and May 12, 1902.

Nashville.—Has had three sea practices during the year on the following dates: December 9, 1901; March 8 and May 29, 1902. While cruising singly subcaliber target was put overboard daily at sea, except Sundays, at 9.30 a. m., and 1.30 p. m., for exercises and instruction for gun pointers. In addition to this gallery practice is held during the day by the divisions.

The gun mounts of the 6-inch guns of the *San Francisco* are of the old pattern, Mark III, gravity return. Although thoroughly overhauled the day before the only practice was held, several of the mounts

developed difficulty in training. It is impracticable to remedy the inherent defects of these carriages. Detailed reports covering the above practices have been forwarded to the Department.

The discipline of the command has been excellent. The following is a summary of enlistments, discharges, desertions, courts-martial, and petty punishments for the fiscal year:

	Illinois.	Albany.	San Francisco.	Chicago.	Nashville.
Enlistments	5	3	.....	17	6
Discharges	2	1	.....	30	3
Desertions	25	23	1	35	20
General courts-martial .....	.....	1	.....	2	1
Summary courts-martial	43	35	7	48	15
Petty punishments	359	826	191	427	376

Covers period from April 1 to June 30, 1902. Covers period from April 15 to June 30, 1902. The returns for *Albany*, *Chicago*, and *Nashville* are for the fiscal year.

The sanitary condition of the vessels of the squadron has been excellent, with the exception of the *Albany*, on which ship the condition of the berth deck and storeroom, with regard to ventilation, is very unsatisfactory, as reported on former occasions.

The health of the fleet has been good.

The average complement was 1,995. There were 4,290 sick-days, the daily average being 47 and the percentage of sick 2.35. Twenty-three cases were transferred to hospital. Of these 18 were sent to the naval hospital, New York, from the *Illinois* prior to her leaving the port. The *Albany* sent one man to the International Hospital, Naples, who died, and the *Chicago* sent three to the same hospital, one of whom died. The *San Francisco* sent two cases to the Colonial Hospital, Gibraltar.

The *Illinois* contracted grippe, mumps, measles, scarlet fever, and scabies during her stay at New York. The last case of scarlet fever developed a few days after leaving that port. The patient was isolated on the after bridge for a period of seven weeks.

Thirty-nine cases of mumps were admitted, six of which were transferred to the naval hospital, New York. The last case was discharged from the list June 18, 1902.

Smallpox was exceptionally prevalent in Europe during the winter, but has been steadily on the decline. It has not assumed the proportion of an epidemic in any of the ports visited by the fleet during the past quarter. The crews of the different ships are well protected by vaccination.

La grippe prevailed very extensively at Algiers during the spring, and a large number of cases developed on the *Chicago*, 18 of which were admitted to the sick list. On the *Illinois* 41 cases were admitted.

Summary of men sent to hospital, deaths, and number invalided home.

	Illinois.	Albany.	San Francisco.	Chicago.	Nashville.
Hospital	18	3	2	3	.....
Invalided .....	.....	4	.....	11	2
Deaths .....	.....	6	.....	1	.....
Percentage of sick	2.78	8.34	2.81	1.28	2.032

BUREAU OF NAVIGATION.

EVENTS ON THE STATION.

Soon after my arrival on the station the *Nashville* was sent for a cruise around the Mediterranean to visit unfrequented ports, for the purpose of showing the flag and investigating such American interests as might be encountered. Early in June I proceeded with the *Albany* and *Chicago* under my command to northern Europe, my intention being to visit England and attend the coronation naval review with the *Illinois*, leaving the *Chicago* and *Albany* at French ports. As a report concerning the assemblage of naval vessels at Spithead has been separately made, this event need not be touched upon here. During the stay of the *Illinois* at Spithead the *Chicago* and *Albany* remained in French ports, joining the flag later for a cruise to the northward.

Very respectfully,

A. S. CROWNINSHIELD,
Rear-Admiral, U. S. Navy, Commander in Chief.

The SECRETARY OF THE NAVY,
Navy Department, Washington, D. C.

P.

**ESTIMATES OF APPROPRIATIONS REQUIRED FOR THE SERVICE OF THE FISCAL
YEAR ENDING JUNE 30, 1904, BY THE BUREAU OF NAVIGATION, NAVY
DEPARTMENT.**

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
FOR THE SUPPORT OF THE BUREAU OF NAVIGATION.			
<i>Salaries, Bureau of Navigation:</i>			
1 chief clerk (R. S., p. 70, sec. 416; act Apr. 28, 1902).....	\$2,000.00		
1 clerk of class 4 (R. S., p. 27, secs. 167-169; act Apr. 28, 1902).....	1,800.00		
3 clerks of class 3 (same act).....	4,800.00		
4 clerks of class 2 (same act).....	5,600.00		
4 clerks of class 1 (same act).....	4,800.00		
6 clerks, at \$1,000 each (same act).....	6,000.00		
2 copyists, at \$900 each (same act).....	1,800.00		
20 copyists, at \$840 each (same act).....	16,800.00		
3 copyists, at \$720 each (same act).....	2,160.00		
3 assistant messengers, at \$720 each (same act).....	2,160.00		
3 laborers, at \$660 each (same act).....	1,980.00		
1 laborer, at \$660 (submitted) ^a	660.00		
		\$50,560.00	\$49,900.00
<i>Salaries, Office of Naval Intelligence:</i>			
1 clerk of class 4 (act Apr. 28, 1902, vol. 32, p. 153).....	1,800.00		
1 clerk of class 2 (same act).....	1,400.00		
1 translator (same act).....	1,400.00		
1 assistant draftsman (same act).....	1,200.00		
3 clerks, at \$1,000 each (same act).....	3,000.00		
1 laborer (same act).....	660.00		
		9,460.00	9,460.00
NOTE.—During the fiscal year ending June 30, 1902, there have been employed in this office, but paid from the appropriation "Increase of the Navy," the following: 1 writer, at \$4 per diem, 1 special laborer (messenger boy), at \$2 per diem.			
FOR THE NAVAL SERVICE.			
<i>Transportation:</i>			
Transportation of enlisted men and apprentices at home and abroad; transportation and subsistence en route to their homes, if residents of the United States, of enlisted men and apprentices discharged on medical survey; transportation and subsistence en route to the places of enlistment, if residents of the United States, of enlisted men and apprentices discharged on account of expiration of enlistment; apprehension and delivery of deserters and stragglers, and for railway guides and other expenses incident to transportation (acts May 4, 1898, vol. 30, p. 370, sec. 1; Mar. 3, 1899, vol. 30, p. 1025, sec. 1; Mar. 3, 1901, vol. 31, p. 1109, sec. 1; July 1, 1902).....		200,000.00	
<i>Recruiting:</i>			
Expenses of recruiting for the naval service; rent of rendezvous and expenses of maintaining the same; advertising for and obtaining men and apprentices, and all other expenses attending the recruiting for the naval service (acts May 4, 1898, vol. 30, p. 370, sec. 1; Mar. 3, 1899, vol. 30, p. 1025, sec. 1; Mar. 3, 1901, vol. 31, p. 1109, sec. 1; July 1, 1902).....		80,000.00	
<i>Contingent:</i>			
Freight, telegraphing on public business, postage on letters sent abroad, ferrage, fee, continuous-service certificates, discharges, good-conduct badges, and medals for men and boys, books for training apprentices and landsmen, maintenance of gunnery and other training classes, packing boxes and materials, and other contingent expenses and emergencies arising under cognizance of the Bureau of Navigation unforeseen and impossible to classify (acts May 4, 1898, vol. 30, p. 370, sec. 1; Mar. 3, 1899, vol. 30, p. 1025, sec. 1; Mar. 3, 1901, vol. 31, p. 1109, sec. 1; July 1, 1902).....		25,000.00	275,000.00

^a Borne on the rolls of the Nautical Almanac Office and dropped from the estimate of that office for the fiscal year ending June 30, 1904.

REPORT

OF THE

CHIEF OF THE BUREAU OF ORDNANCE.

DEPARTMENT OF THE NAVY,
BUREAU OF ORDNANCE,
Washington, D. C., October 1, 1902.

SIR: I have the honor to submit the annual report of this Bureau, and also to transmit herewith estimates for the fiscal year ending June 30, 1904.

ESTIMATES.

Fuel, tools, materials, and labor; maintenance of proving ground and smokeless-powder factory; for target practice; conversion of 8-inch guns to rapid-fire; reserve supply of ammunition; purchase and manufacture of smokeless powder; new and improved battery for the <i>New York</i> ; new boiler plant, new and improved machinery for existing shops, extension of steel casting plant, and for conversion of large gun lathes from steam to electric drive; for the Naval Gun Factory, navy-yard, Washington, D. C.	\$2, 485, 000. 00
General expenses of the torpedo station	65, 000. 00
Naval Militia	60, 000. 00
General repairs to buildings, magazines, machinery, etc.	30, 000. 00
Contingent, freight, etc. (miscellaneous ordnance)	75, 000. 00
Civil establishment at navy-yards and stations	46, 006. 75
Public works, Bureau of Ordnance:	
New naval magazine at or near Boston, Mass	300, 000. 00
Additional wharves and slips for torpedo boats, and for moving present boathouse and dredging, torpedo station, Newport, R. I.	25, 000. 00
Tools and improvements, naval magazine, Iona Island, New York.	14, 200. 00
Electric elevators and storehouses, improvements to shell houses and magazines, naval powder depot, New Jersey	19, 600. 00
Steel gun platforms, sulphuric-acid plant, lightning protection, for Naval Proving Ground, Indian Head, Md.	50, 500. 00
Shell house, naval magazine, St. Juliens Creek, Virginia	11, 000. 00
Connecting with city water mains naval magazine, Fort Norfolk, Va	1, 500. 00
Increase of the Navy, armor and armament	10, 000, 000. 00
Total	13, 182, 806. 75

The operations of the Bureau during the past year have chiefly been those of preparing the armament and ordnance outfits and providing armor for vessels under construction, maintaining vessels in commission, overhauling and refitting for service the batteries, etc., of vessels in ordinary, and improving the condition and facilities of the ordnance department at the several naval magazines, navy-yards, and stations to meet the increasing requirements of the Navy.

The armament and ordnance outfit for battle ships *Maine*, *Missouri*, and *Ohio*, and for harbor-defense monitors *Arkansas*, *Florida*, *Nevada*, and *Wyoming* is in an advanced stage, the more important part being already completed; and that for the six cruisers of the *Denver* class, the next vessels to be completed, is also in an advanced stage and will be ready for the vessels when required.

Two hundred and thirty-four guns have been completed at the Naval Gun Factory; 65 are in process of manufacture, and sets of forgings for 146 guns of various calibers have been delivered, on which no work has yet been performed. One 13-inch gun has been relined and six 30-caliber 6-inch B. L. guns have been converted into quick-firing guns. Two hundred and seventy-five gun mounts of various types have been completed, and a large number of others are in process of manufacture; and much work has been done in the way of alterations and improvements to mounts of earlier manufacture with a view to improving their efficiency. No material change has been made in the method of gun construction, except that the tubes of all guns of late manufacture of and above 6 inches in caliber are reinforced to the muzzle.

A new battery of twelve 6-inch, quick-firing guns and mounts for the *Baltimore*, for which a special appropriation was granted, is being manufactured by the Bethlehem Steel Company, and will be completed in a few months.

Work is now in progress on the armament for 5 battle ships of the *Virginia* class, for 6 armored cruisers of the *Pennsylvania* class, and for 3 protected cruisers of the *St. Louis* class. These vessels require twenty 12-inch guns of 40 calibers, sixty-four 8-inch guns of 45 calibers, one hundred and eighty-six 6-inch guns of 50 calibers, two hundred and twenty-two 3-inch guns of 50 calibers, one hundred and sixty-eight 3-pounder semi-automatic guns, and a large number of other small guns.

The forgings have already been delivered for a large number of the above guns and work thereon is now in progress.

No work has yet been begun upon the armament of the 2 battle ships, 2 armored cruisers, and 2 gunboats authorized at the last session of Congress, the vessels not yet being begun or contracted for.

For the two new battle ships *Louisiana* and *Connecticut*, 12-inch guns of 45 calibers have been designed, this increase in length of 5 calibers over the previous design being made in order that the muzzles of the guns will project well clear of the ship's side, when they are trained abeam, in order that the blast from them may not affect the medium caliber guns on the deck below.

The 13-inch gun which was injured on board the *Kearsarge* in January, 1901, by the premature explosion of a shell in its bore, has been repaired by the insertion of a lining tube, and is now in use at the Naval Proving Ground.

The only accident of importance that has occurred to guns afloat was on board the *Kearsarge* on February 21, 1902, when the muzzle of a 5-inch gun was broken off at target practice; fortunately no one was injured. Brown powder was being used at the time, and the presumption is that the powder had become slow and carried the pressure too far towards the muzzle.

Thirteen-inch gun No. 2, on board the *Indiana*, to which reference has been made in previous reports as being somewhat eroded at the

BUREAU OF ORDNANCE.

armor contracts.

Date of contract, completion.	Date of act authorizing armor.	Limit of, or average cost of, armor per ton.	Date of armor contract.	Armor contracted for.	Armor contractor.	Elapsed time between contract of ship and of armor.
				<i>Tons.</i>		<i>Months.</i>
	Mar. 3, 1887	\$604.85	June 1, 1887	237.17	Bethlehem	3
		574.00	Nov. 20, 1890	426.98	Carnegie	32
	do	574.00	do	161.34	do	3
	do	574.00	do	513.62	do	32
	do	574.00	do	628.61	do	32
	do	604.85	June 1, 1887	1,126.46	Bethlehem	3
	do	604.85	do	1,064.77	do	10
	do	604.85	do	1,221	do	10
June 14, 1892	do	604.85	June 1, 1887	174.26	do	24
July 28, 1892	June 30, 1890	574.00	Nov. 20, 1890	531.97	Carnegie	17
Jan. 1, 1893	Sept. 7, 1888	574.00	do	775.07	do	b 2
Feb. 11, 1896	July 19, 1892	671.13	Feb. 28, 1893	517.46	do	8
		646.41	Mar. 1, 1893	661.29	do	
Nov. 19, 1893	Mar. 2, 1891	646.41	do	40.73	Bethlehem	
		574.00	Nov. 20, 1890	899.74	do	27
		604.85	June 1, 1887	1,866.80	Carnegie	
Nov. 18, 1893	do	646.41	Mar. 1, 1893	2,191.25	Bethlehem	27
		574.00	Nov. 20, 1890			
		671.13	Feb. 28, 1893	582.28	Carnegie	27
		604.85	June 1, 1887			
Nov. 19, 1893	do	646.41	Mar. 1, 1893	2,316.53	do	27
		574.00	Nov. 20, 1890	429.62	do	27
		671.13	Feb. 28, 1893			
Feb. 11, 1896	July 19, 1892	671.13	Feb. 28, 1893	1,811.54	Carnegie	
Mar. 24, 1898	Mar. 2, 1895	646.41	Mar. 1, 1893	791.63	Bethlehem	
do	do	547.96	June 1, 1896	2,830	do	6
Sept. 24, 1899	May 4, 1898	552.50	do	2,830	Carnegie	6
Sept. 26, 1899	do	c 400.00	June 9, 1898	2,569	Bethlehem	20½
Sept. 19, 1899	do	c 400.00	June 3, 1898	1,406	do	20½
June 1, 1901	Mar. 3, 1899	c 400.00	June 9, 1898	1,153	Carnegie	20½
June 5, 1901	do	c 420.00	June 3, 1898	2,569	do	20½
June 11, 1901	do	c 400.00	Nov. 28, 1900	2,451	Bethlehem	26
Mar. 11, 1901	do	c 420.00	Nov. 26, 1900	1,225	Carnegie	26
Jan. 19, 1901	do	c 400.00	Nov. 28, 1900	1,225	Bethlehem	26
Oct. 11, 1900	do	c 400.00	Nov. 26, 1900	2,451	Carnegie	26
Jan. 5, 1901	do	c 420.00	Aug. 30, 1899	538	do	10
Feb. 15, 1904	do	c 400.00	do	538	do	10
Mar. 7, 1904	do	c 400.00	Oct. 4, 1899	541.44	Bethlehem	12
Feb. 18, 1904	do	c 400.00	do	541.44	do	12
Jan. 10, 1904	do		Nov. 26, 1900	3,332	Carnegie	b 2
Jan. 24, 1904	do		Nov. 28, 1900	3,332	Bethlehem	b 3
Jan. 10, 1904	do		do	3,332	do	b 2
Jan. 24, 1904	do		do	1,900	do	b 1
Jan. 10, 1904	do		do	950	do	1
Jan. 24, 1904	do		Nov. 26, 1900	950	Carnegie	b 1
Jan. 10, 1904	do		do	1,900	do	b 1
Jan. 24, 1904	do		do	3,332	do	b 2
Jan. 10, 1904	do		do	3,332	do	b 2
Jan. 24, 1904	do		Nov. 28, 1900	1,900	Bethlehem	b 1
Jan. 10, 1904	do		do	950	do	b 1
Jan. 24, 1904	do		Nov. 26, 1900	950	Carnegie	b 1
Jan. 10, 1904	do		do	1,900	do	b 1
Jan. 24, 1904	do		Nov. 28, 1900	371	Bethlehem	
Jan. 10, 1904	do		Nov. 26, 1900	371	Carnegie	b 3
Jan. 24, 1904	do		Nov. 28, 1900	742	Bethlehem	b 4
Jan. 10, 1904	do		Nov. 26, 1900	742	Carnegie	b 4
Mar. 18, 1906			Armor not contracted for.			
				72,106		

c Does not include royalties.

POWDER.

With the exception of ignition and shell powder, no black or other than smokeless powder has been purchased or manufactured for the Navy since the Spanish-American war. All new ships, beginning with the *Kearsarge* and *Kentucky*, have been supplied with outfits of smokeless powder, and, in addition, some thirty of the older vessels have been thus supplied.

The manufacture of smokeless powder during the past year has progressed in a satisfactory manner, so far as quality is concerned, but not so much so as to the amount delivered, as a large quantity has been required both for new and old ships, not only in the way of original outfits but to make good the annual consumption due to target practice which amounts in the aggregate to a very large quantity. Efforts have, however, been made to secure more rapid delivery, and it is expected that the Bureau's requirements in this respect will be satisfactorily met hereafter.

The reports of inspections and tests of smokeless powder during the year from ships and from powder magazines have been favorable, and no unstable powders have been detected, except a small lot of 3-inch powder at Norfolk.

Numerous retests of powder of earlier date of manufacture have been made for the purpose of determining whether it had undergone any chemical change or if its ballistic properties had changed. It may be definitely stated that, so far as stability is concerned, the results have been of a most satisfactory character, and with few exceptions the ballistic properties of the powders have practically remained unchanged. In a few instances the powder has become drier, and in consequence quicker; but in one instance only did a retested sample of service powder show what might be considered an undue increase in pressure, and this was unquestionably due to the fact that after the weight of charge had been fixed the powder dried out somewhat before it was put up for issue. All smokeless powder is now dried to a proper degree and is then immediately packed in airtight, zinc-lined cases, in order that it may retain practically the same amount of volatiles. It is not unlikely that, by some improved process of drying, practically all the volatiles can be removed from smokeless powder, and then when tested it will be in its most efficient condition; and should it thereafter take up a slight percentage of moisture, it would become less violent; that is, slower; but it must still be kept as dry as possible, for a too slow powder might endanger the muzzle of the gun.

Numerous experiments have been conducted at Indian Head with a view to establishing a reduced charge of smokeless powder for large-caliber guns, for use in target practice, not only on the score of economy in the expenditure of powder, but to save the wear and tear on the guns and mounts. The results thus far are not entirely satisfactory, for as the weight of the charge is reduced the ratio of weight of powder for muzzle energy produced increases. This is not, however, of much importance if uniform velocities can be obtained with reduced charges.

A number of experiments have been made at Indian Head with a view to determining the best and most expeditious method of drying smokeless powder and of the effect of such method upon the powder. It is most important that the process of drying should be done as quickly as is practicable, provided it does not injuriously affect

the quality of the powder, for by the method at present employed the larger sizes must remain many weeks in the dry house, thus retarding delivery and jeopardizing a large amount of capital and requiring very large drying facilities. A system of water drying has been tried which greatly reduces the length of time, but it remains to be seen whether powder thus treated is as satisfactory as when dried by the ordinary process. Other methods have been proposed which seem likely to be attended with favorable results, and continued investigation and experiment will be made with a view to a final and satisfactory solution of this important question.

Interesting experiments have been made with a view to determining the feasibility of imparting some coloring matter to smokeless powder during the process of manufacture, which would indicate by a change, or by losing its color whether the powder was undergoing dangerous decomposition. With this end in view, samples of powder colored with rosaniline, which imparts a deep carmine color to it, have been made. When subjected to undue heat for a sufficient period to cause decomposition, the powder thus treated has lost its color, retaining it while in normal condition. It may be that some such method can be used, which would aid in detecting decomposing powders.

Important changes have been made in the method of determining the volatiles in smokeless powder, which may also furnish a means of eliminating all outside influences in making stability tests.

The quality of smokeless powder manufactured during the year is decidedly superior to that previously manufactured, due to the more thorough purification of the "pyro" entering into its composition, the greater rigidity of the acceptance tests, and to a better knowledge and more accurate determination of the best size and shape of the grain and the thickness of wall for each caliber. These results are largely due to the fact that the possession of a powder plant has rendered it possible to carry on investigations which would otherwise have been practically impossible.

The adoption of black prismatic in place of fine-grain black powder for ignition charges has been attended with very satisfactory results, a much less weight of powder being required when prismatic powder is used. The smoke due to the ignition charge is hardly perceptible.

In the case of the 12-inch, 40-caliber guns the ignition charge has been reduced from 14 pounds of fine-grain black powder to 2½ pounds of black prismatic. In the case of 6-inch guns three prisms of black powder form an efficient ignition charge, and in 4-inch guns one prism. Special forms of pressed black powder for use in guns using brass cartridge cases have been made for experiment.

Notwithstanding the utmost care in the manufacture and packing of smokeless powder and of determining the proper charge for a given muzzle velocity, it is almost certain that slight changes in its ballistic properties will from time to time be observed, due to changes of temperature alone.

The Bureau is making arrangements to redry and repack all smokeless powder now in store and will fix new charges for each index after drying.

Attention is invited to the interesting report, to be found in the Appendix, of Lieut. C. M. McCormick, U. S. Navy, the inspector of powder in the Eastern States, to whom the Bureau is very much

indebted for the zeal with which he has performed his duties and for his intelligent efforts to improve the methods of manufacture and inspection of smokeless powders.

PROJECTILES.

The Bureau has a large store of projectiles on hand, of earlier type, designed when lower chamber pressures were in vogue. In consequence, those having particularly thin walls have been withdrawn from service, as it is feared they might break up in the guns.

The most interesting event during the year in connection with projectiles is the development by the Firth-Sterling Steel Company of a new type of shell combining the advantages of the armor-piercing with the common shell; that is, having the perforating power of the regular armor-piercing projectile with the capacity for a large bursting charge. The requirements for these shell on test are that at a prescribed velocity they shall completely perforate, unbroken, a plate of hard-faced armor a caliber in thickness and then be in condition for effective bursting. A number of shells of this description have been ordered, and several lots have successfully fulfilled the requirements. These shell are fitted with soft caps.

SIGHTS.

Several new sights have been designed, and a number are being made for trial.

Over one hundred telescopic sights have had their cross-wire changed, two being substituted for the three originally used, much finer wires being used than formerly.

Sliding-leaf attachments for deflection have been provided in the case of sights recently made, both for open and for telescopic sights.

Telescopes of different power have been ordered, both high and low, for comparative test, and should it be found desirable to supply both, the Bureau is prepared to do so.

All new guns of and above 4 inches in caliber are now supplied with sights on both sides, and also guns of older manufacture as opportunity offers.

RANGE FINDERS.

No thoroughly satisfactory range finder for use on board ship at sea has been brought to the Bureau's notice, though a considerable number of designs have been submitted by inventors, most of which, however, were so crude that they gave no promise of utility.

A prismatic instrument, designed by Messrs. Searles and Saegmuller, for determining the distance of an object from an elevation when the horizon is visible, has been submitted and is now under consideration.

A Barr and Stroud range finder has been in use on board the *Albany* for the past year, it has been favorably reported on, and a number of similar ones have been ordered from the manufacturers.

Two Zeiss stereoscopic range finders have recently been received, and are now being tested, and are favorably regarded.

Lieut. Cleland Davis, U. S. Navy, has designed a range finder for use on shore, and an experimental one has been made by the Army for test.

The vertical range finder referred to in the Bureau's last report, while correct in principle, proved to be unsatisfactory in some respects for use on board ship.

A new type of Fiske range finder has been installed on board the *Cincinnati* for test, it is apparently correct in principle, but the location of the observation towers is not entirely satisfactory.

FUZES AND PRIMERS.

Several new designs of base percussion fuzes have been made and tested, some have given excellent results, while others have proved unsatisfactory; the same may be said with regard to primers, but it is believed that a satisfactory combination electric and percussion primer for B. L. and R. F. guns and a safe and reliable base percussion fuze has been developed.

An ingenious device called a "tracer" has been submitted to and experimented with by the Bureau. It consists of a burning composition incased in the rear end of the base-fuze stock, which is lighted after the projectile leaves the muzzle of the gun, the idea being to follow with the eye the flight of small projectiles fired at night.

The device has worked admirably at the proving ground, and a number of one-pounder shells so fitted have been sent to one of the battle ships for further experiment and to see what the effect will be when they are fired in the beam of a searchlight.

GAS CHECKS.

While the plastic pad and split rings used as gas checks in our naval guns have given good results in general, occasions occur from time to time when the pads get cut, are burned, or become partially squeezed out, resulting in the sticking of the plug and consequent delay in opening the breech and replacing the pad. Efforts are being made to overcome such occurrences, or at least to reduce them to a minimum, and some experimental pads are now being tested which were subjected to considerably greater pressure than was formerly used in the process of manufacture in the hope that they will prove to be an improvement upon those now in use. When guns become heated from rapid firing, the pads will soften, and in such condition are liable to give trouble.

Whatever disadvantage brass cartridge cases may have, they certainly have the advantage of effectively checking the gas and obviating the sticking and jamming of breech plugs, and the German system which makes use of the brass case for guns of all calibers, even to the largest, has decided advantages over any other in these particulars. Such cases, however, could not be used with our latest type of guns above those of 4 inches in caliber, as they all have enlarged powder chambers with openings of reduced diameter. Moreover, the weight and bulk of a charge of navy smokeless powder is so much greater than that used in the German guns that the brass cases, were it possible to use them, would be so long and unwieldy that it would be almost impracticable to handle them.

The metallic gas check used in all French naval guns above those of 6 inches in caliber, similar to the old Broadwell ring, has many advantages, and the Bureau is having a 6-inch B. L. rifle fitted with such a device for trial.

TORPEDOES.

No new torpedoes have been manufactured for the Bureau during the past year.

Torpedo tubes for under-water discharge have been installed on board the *Maine*, and others for the *Ohio* and *Missouri* have been shipped to the builders' yards.

The torpedo armament for all torpedo boats and destroyers authorized has been provided for.

Experimental torpedoes, quite different in many important features from those now in service, have been designed and will soon be tested.

Experiments for the Bureau have been made with various forms of torpedoes by the Bureau of Construction and Repair in its model basin, to determine the relative value of each.

Further tests with adjustable gyroscopic steering devices in torpedoes have been made, with excellent results.

A number of electrically driven air compressors have been completed and thus far have given satisfaction.

During the past year electric firing devices have been installed in all new torpedo vessels, which seem to fully meet all requirements.

SMALL ARMS.

There are now in service fifteen thousand 6-millimeter, or caliber .236, rifles, and 16,720 United States magazine rifles, caliber .30, the latter being the army standard.

It is manifestly improper and prejudicial to the interests of the Navy that such a condition should continue, and the Bureau therefore recommends that the 6-millimeter rifles be retired from service as soon as practicable and be replaced by others of the caliber used by the Army.

In December, 1898, a joint board of army, navy, and marine officers, on the recommendation of the Bureau, was convened to consider the question of the adoption of a uniform caliber for small arms and machine guns, and of a standard and uniform small-arm cartridge for the use of the Army, Navy, and Marine Corps. Said board reported that the same caliber should be adopted for these services, and that the Navy and Marine Corps should use the same caliber rifle and ammunition as is used by the Army. Since that date all new small arms purchased for the Navy have been of caliber .30—the same as used by the Army—but it has not been possible to replace the 6-millimeter rifles out of current appropriations. Reports from commanders in chief and commanders of vessels are frequently received requesting that the vessels under their command be supplied with the United States magazine, caliber .30, rifle; and the commander in chief of the United States naval force on the Asiatic Station has written in the strongest terms in support of such a measure, largely on the ground that the 6-millimeter rifle is less reliable in service than the United States magazine rifle used by the Army.

The Bureau therefore recommends that an appropriation of \$300,000 be requested for this purpose and \$200,000 for ammunition therefor. This measure is considered as of great importance, but it can only be carried out by means of a special appropriation.

PUGET SOUND NAVY-YARD, BREMERTON, WASH.

Two magazines have been completed in the navy-yard, but they will probably be used as storehouses, as it is contemplated to erect a magazine outside the limits of the yard.

The ordnance workshop, funds for the erection of which were included in the appropriation for the above magazines, has not been begun, as the balance remaining after the magazines were completed was not sufficient for the purpose. Funds should be appropriated for this object. Congress at its last session appropriated \$50,000 for machinery for this shop, which can not be utilized until the building is completed. It is recommended that this sum be made available for the purpose.

At its last session Congress appropriated money for the purchase of land for a site for a naval magazine at or near Bremerton, Wash., and toward the erection thereon of the necessary buildings, etc. A board of officers was appointed to select a site and recommended a peninsular in Dyes Inlet as a suitable location, and negotiations are now in progress looking to its acquisition.

Further improvements are needed at the Puget Sound Navy-Yard, and the following are recommended:

1. A storehouse for guns.
2. Completion of ordnance workshop (previously authorized).
3. Quarters for inspector of ordnance.

NAVAL MAGAZINE, CAVITE, P. I.

The powder magazines now used for naval purposes at Cavite are the casemates of an old Spanish fort. The latest report from the ordnance officer of the station contains the following remarks:

Though there are many good features about the present magazines for the storage of ammunition, there are some that appear to be bad—

(a) All the casemates are connected by doorways that are only in a few instances closed at all, and those by thin doors.

(b) The proximity of buildings occupied as barracks or living quarters and the new equipment building.

While realizing that there may be little danger of the magazines exploding, and though there may be different ideas as to the injury that would be done and the distance through which it would act, it is known that magazines do explode and that the injury is great and acts over a large area.

Feeling as I do, I am constrained to recommend that steps be taken to acquire another magazine site and that the amount of ammunition stowed in the present magazine be very much reduced; that it be used only as a ready magazine.

On this report the commandant of the navy-yard makes the following indorsement:

Referring to paragraph 13, relative to the location of the magazines and shell rooms. During the past eight months the attention of the Bureau of Ordnance, the commander in chief, and the squadron commander have been invited to the very undesirable position of the magazines within the limits of this yard.

The recommendations heretofore made, that the magazines be removed without delay, are earnestly renewed. The continued use of a magazine within the limits of a yard, and within 200 yards of a thickly populated town, would not, it is believed, be permitted at any station in the United States. While there is no entirely satisfactory site for a naval magazine in the immediate vicinity of the Cavite naval station, I am of the opinion that the location at the mouth of the Imus River (formerly used by the Spaniards as a naval magazine) is suitable and conveniently located.

From these reports it is evident that the magazines ought to be located elsewhere, and that with as little delay as possible; and the

Bureau has requested the Department to direct the commander in chief of the Asiatic Station to order a board of officers to examine and report as to the necessity of such removal and, if it is considered necessary, to recommend a site and the number, size, and kind of buildings required and the estimated cost thereof, and, in anticipation of such removal, recommends that an appropriation of \$50,000 be requested for the purpose.

In addition to the above the Bureau recommends that the following improvements be made for ordnance purposes at Cavite.

1. Ordnance workshop.
2. Ordnance storehouse.

The present facilities at Cavite for performing repair and other ordnance work and for the storage of material are of a most meager kind and are inadequate to meet present requirements; and if Cavite is to be retained as a naval station, they should be improved.

A steel ordnance lighter is now being built at Mare Island to be sent in sections to Cavite, and the Bureau has requested that a larger one, having its own motive power, be also built.

INSTRUCTION OF ENLISTED MEN.

The number of enlisted men under instruction during the past year for seaman gunners, both at the Naval Gun Factory and at the torpedo station, has been very small, the total number at the gun factory being but 37 and at the torpedo station but 33. The facilities at both establishments are adequate for much larger numbers, and the Bureau urgently recommends that not less than 50 men be continually under instruction at each place.

The importance of training men for the duties of seaman gunner can not be overestimated in view of the complex character of the ordnance, electric, and torpedo outfits of modern ships; and if efficiency is to be expected in those branches, men must be given a special course of instruction which will fit them to properly care for and understand the apparatus which it will be their duty to maintain in an efficient condition on board ship. Enlarged and improved quarters and special shops for the use of enlisted men have been provided at great expense, and it seems unwise not to utilize them to their fullest extent.

SUBMARINE BOATS.

No important developments have taken place in this country during the past year with respect to vessels of this class, and none, so far as can be learned, of any consequence abroad, though quite a number of these vessels are being built and experimented with. The seven boats of the Holland type now under contract have not been completed, though they are in an advanced stage and will soon have their official trials for acceptance.

The original *Holland* has been stationed at Newport and at Annapolis for the purpose of training men for the new boats, but it appears that none except the *Holland's* own crew have been trained as yet.

There have been two explosions on boats of this type under rather peculiar circumstances. The first was on board the *Fulton*, on April 28, 1902, the circumstances being as follows: The *Fulton* was en route

for the Navy, there is a wide field for clever young men in this direction, and no branch of the naval service is more interesting, attractive, or more strictly professional than the study of ordnance.

EXPENDITURES FOR LABOR.

The amount expended for labor in the Ordnance Department of the several navy-yards and stations from the appropriations under the cognizance of the Bureau during the past fiscal year was as follows:

NAVY-YARD, PORTSMOUTH, N. H.

Ordnance and ordnance stores.....	\$5,676.06	
Increase of the Navy, armor and armament.....	35.56	
Civil establishment.....	1,000.00	
		\$6,711.62

NAVY-YARD, BOSTON, MASS.

Ordnance and ordnance stores.....	27,966.59	
Increase of the Navy, armor and armament.....	31.40	
Civil establishment.....	1,000.00	
Repairs, ordnance.....	424.33	
		29,422.32

NAVY-YARD, NEW YORK.

Ordnance and ordnance stores.....	99,716.72	
Increase of the Navy, armor and armament.....	63,495.05	
Civil establishment.....	1,400.00	
Repairs, ordnance.....	4,200.00	
Magazine, Fort Lafayette.....	654.95	
Magazine, New York Harbor.....	55,121.31	
Magazine, Dover, N. J.....	20,593.39	
		245,181.42

NAVY-YARD, LEAGUE ISLAND, PA.

Ordnance and ordnance stores.....	24,304.06	
Increase of the Navy, armor and armament.....	9,644.47	
Civil establishment.....	1,200.00	
Repairs, ordnance.....	1,200.00	
Magazine, Fort Mifflin.....	515.34	
Ordnance machinery, League Island.....	357.00	
		37,220.87

NAVY-YARD, WASHINGTON, D. C.

(Including proving ground, Indian Head.)

Ordnance and ordnance stores.....	157,000.00	
Increase of the Navy, armor and armament.....	1,236,234.77	
Civil establishment.....	13,343.46	
Repairs, ordnance.....	3,619.43	
Increase of the Navy, gun plant.....	33,032.45	
Modern battery for <i>Hartford</i>	26,000.00	
Reserve guns auxiliary cruisers.....	76,504.16	
Experiments with armor-piercing projectiles.....	1,005.94	
Torpedo station.....	1,701.05	
		1,548,342.26

NAVY-YARD, NORFOLK, VA.

Ordnance and ordnance stores.....	66,302.01	
Increase of the Navy, armor and armament.....	3,933.95	
Civil establishment.....	1,200.00	
Naval magazine, Norfolk.....	1,164.71	
Repairs, ordnance.....	374.63	
		72,975.30

NAVY-YARD, PENSACOLA, FLA.

Ordnance and ordnance stores.....	\$953. 64
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NAVY-YARD, MARE ISLAND, CAL.

Ordnance and ordnance stores.....	\$47, 122. 36	
Increase of the Navy, armor and armament.....	2, 277. 10	
Civil establishment.....	1, 130. 00	
Repairs, ordnance.....	1, 110. 60	
		51, 640. 06

TORPEDO STATION, NEWPORT, R. I.

Ordnance and ordnance stores.....	45, 306. 11	
Increase of the Navy, armor and armament.....	23, 695. 70	
Civil establishment.....	5, 196. 93	
Torpedo station.....	30, 652. 65	
Torpedo station, buildings.....	1, 350. 77	
Reserve torpedoes and appliances.....	4, 229. 64	
		110, 431. 80

PORT ROYAL, S. C.

Ordnance and ordnance stores.....	963. 19
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PUGET SOUND, WASH.

Ordnance and ordnance stores.....	3, 253. 76	
Increase of the Navy, armor and armament.....	347. 47	
		3, 601. 23

CAVITE, P. I.

Ordnance and ordnance stores.....	29, 371. 51	
Emergency.....	991. 69	
Repairs, ordnance.....	2, 124. 40	
		32, 487. 60

SAN JUAN, P. R.

Ordnance and ordnance stores.....	2. 40
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HAWAII.

Ordnance and ordnance stores.....	16. 56
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Total.....	\$2, 139, 950. 27
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AGGREGATE OF APPROPRIATIONS.

Ordnance and ordnance stores.....	507, 954. 97
Increase of the Navy, armor and armament.....	1, 339, 695. 47
Civil establishment.....	25, 370. 39
Repairs, ordnance.....	13, 053. 39
Torpedo station.....	32, 354. 70
Torpedo station—buildings.....	1, 350. 77
Reserve torpedoes and appliances.....	4, 229. 64
Magazine, Fort Lafayette.....	654. 95
Magazine, New York Harbor.....	55, 121. 31
Magazine, Dover, N. J.....	20, 593. 39
Magazine, Fort Mifflin, Pa.....	515. 34
Ordnance machinery, League Island.....	357. 00
Increase of the Navy, gun plant.....	33, 032. 45
Modern battery, <i>Hartford</i>	26, 000. 00
Reserve guns, auxiliary cruisers.....	76, 504. 16
Experiments, A. P. projectiles.....	1, 005. 94
Magazine, Norfolk, Va.....	1, 164. 71
Emergency.....	991. 69
Total.....	\$2, 139, 950. 27

PERSONNEL, ETC.

Lieut. Volney O. Chase, U. S. Navy, remains as assistant chief of the Bureau, and the Bureau takes pleasure in recording its high appreciation of his ability, attention to duty, uniform courtesy, and excellent judgment in dealing with the many difficult and important problems that have come before him.

Lieut. Commander A. E. Culver, U. S. Navy, who has recently been ordered to sea duty after a tour of about one year's duty in the Bureau, has rendered valuable service, which the Bureau is pleased to acknowledge.

Lieut. Cleland Davis, U. S. Navy, who has just been detached from duty in the Bureau preparatory to orders for sea, has been on duty in the Bureau since May 22, 1900, in connection with the manufacture of armor, turret mounts, etc. His services have been of very great value to the Bureau, especially in connection with the preparation of specifications for the manufacture of armor, armor contracts, and armor tests, his thorough knowledge of the subject enabling him to deal with such matters in a most satisfactory manner, and the Bureau greatly regrets that the exigencies of the service render his detachment necessary. Lieut. I. K. Seymour, U. S. Navy, who has previously been on duty in the Bureau in connection with armor, has reported as the relief of Lieutenant Davis.

Lieut. F. K. Hill, U. S. Navy, has assumed duty in the Bureau in connection with torpedoes and torpedo vessels, and has charge of the publication of a series of pamphlets descriptive of all the material supplied by the Bureau—a work of great importance and magnitude, requiring a very thorough knowledge of ordnance material, its manufacture and use.

Lieut. Edward McCauley, jr., U. S. Navy, has recently reported, and has temporarily taken up the duties recently performed by Lieutenant-Commander Culver.

Mr. E. S. Brandt remains as chief clerk, and Mr. J. R. Gisburne is financial clerk. The Bureau is pleased to record its appreciation of their long and valuable services in the Bureau.

The Bureau also takes pleasure in acknowledging the efficient and valuable services of the official force and civil employees, both in the Bureau and at the several navy-yards and stations and at private works. One and all have performed their duties well and to the Bureau's satisfaction.

The volume of work grows greater each year and can only be executed by close attention to duty and industry on the part of everyone connected with the Bureau.

The Bureau begs to call attention to the inadequacy of its present quarters. Rooms are overcrowded, rendering it difficult to carry on work with accuracy and dispatch, and the necessary space for records, drawing tables, etc., is absolutely lacking, both for the officers and civil force. All the officers are packed in one room and carry on their work under many difficulties. Every year the situation becomes worse, and soon will be intolerable unless relief is afforded.

The following papers accompany this report:

A.—Officers performing duty.

B¹.—Table showing assignment of guns of main and secondary batteries.

B².—Table showing torpedo armament of vessels.

C.—Detailed estimates for the fiscal year ending June 30, 1904.

D.—Annual report of the superintendent of the Naval Gun Factory.

E.—Annual report of the inspector of ordnance in charge, Naval Proving Ground, Indian Head, Md.

F.—Annual report of the inspector of ordnance in charge of the naval torpedo station, Newport, R. I.

G.—Annual report of the inspector of powder, Wilmington, Del.

H.—Abstract of offers for furnishing supplies or services and which were contracted for by the Bureau of Ordnance during the fiscal year ending June 30, 1902, and contracts awarded thereon.

Respectfully,

CHARLES O'NEIL,
Chief of Bureau of Ordnance.

The SECRETARY OF THE NAVY.

A.

Officers performing ordnance duty.

Name and station.	Duties.
Rear-Admiral Charles O'Neil....	Chief of Bureau.
Lieut. V. O. Chase.....	Assistant chief of Bureau, marine-artillery construction, gun steel, powder, etc.
Lieut. F. K. Hill	Manufacture and development of torpedoes, torpedo outfits of vessels, etc.
Lieut. I. K. Seymour	Manufacture of armor, shield plates, etc.
Lieut. Cleland Davis.....	Do.
Lieut. (Junior Grade) E. McCauley.	Ships' outfits, ships' requisitions and surveys, allowance tables, assignment of batteries, etc.
<i>Private works.</i>	
Rear-Admiral John D. Ford.....	Inspector of ordnance at the works of the Maryland Steel Co., Sparrows Point, Md., and the Columbian Iron Works, Baltimore, Md.
Commander Harrie Webster.....	Inspector of ordnance at works of Wm. R. Trigg Co., Richmond, Va.
Lieut. Commander B. O. Scott....	Inspector of ordnance, Cramp's Shipyard, Philadelphia, Pa., and Neale & Levy, Philadelphia, Pa.
Lieut. Commander E. E. Wright..	Inspector of ordnance at Geo. Lawley & Sons Corporation, Boston, Mass.
Lieut. Commander Simon Cook..	Inspector of ordnance, Union Iron Works, San Francisco, Cal.
Lieut. Commander Howard Gage	Inspector of ordnance, Fore River Ship and Engine Co., Quincy, Mass.
Lieut. Commander W. P. White..	Inspector of ordnance, Gas Engine and Power Co., Morris Heights, New York, and Crescent Shipyard, Elizabethport, N. J.
Lieut. Albert Moritz.....	Inspector of ordnance, B. Atha & Co., Harrison, N. J.
Lieut. C. M. McCormick.....	Inspector of powder, E. I. Du Pont & Co., Wilmington, Del.; Lafin & Rand Powder Co., Pompton Lakes, N. J.; Harlan & Hollingsworth Co., Wilmington, Del.; and International Smokeless Powder and Dynamite Co., South Amboy, N. J.
Lieut. H. F. Bryan	Inspector of ordnance, Bethlehem Steel Co., South Bethlehem, Pa., and Taylor Iron and Steel Co., Highbridge, N. J.
Lieut. G. S. Galbraith	Inspector of ordnance, Midvale Steel Co., Philadelphia, Pa., and Carpenter Steel Co., Reading, Pa.
Lieut. J. A. Bell.....	Inspector of ordnance, American Machine and Ordnance Co., Bridgeport, Conn.; Driggs-Seabury Gun and Ammunition Co., Derby, Conn.; Union Metallic Cartridge Co., Bridgeport, Conn.; Winchester Repeating Arms Co., New Haven, Conn.; Colt's Patent Fire Arms Manufacturing Co., Hartford, Conn., and Smith & Wesson, Springfield, Mass.
Lieut. F. R. Pollock	Inspector of ordnance, E. W. Bliss Co., Brooklyn, N. Y.; I. G. Johnson & Co., Spuyten Duyvil, N. Y., and Rand Drill Co., Tarrytown, N. Y.
Lieut. J. H. Rohrbacker.....	Inspector of ordnance, Carnegie Steel Co., Munhall, Pa.; Firth-Sterling Steel Co., Demmler, Pa., and Union Steel Casting Co., Pittsburg, Pa.
Naval Constructor H. G. Gillmor.	Inspector of ordnance, Bath Iron Works, Bath, Me.
Gunner R. E. Cox.....	Inspector of ordnance, Newport News Shipbuilding and Dry Dock Co., Newport News, Va.
<i>Navy-yard, Washington, D. C.</i>	
Commander E. H. C. Leutze	Superintendent of Naval Gun Factory.
Lieut. Commander J. M. Bowyer.	Executive officer, Naval Gun Factory, in charge of all outdoor work; transportation to proving ground, cars and freight in yard; superintending motor power, cranes, etc.; general order and care of shops, tugs, museum; all appliances for extinguishing fires.
Lieut. Commander W. Brauner-reuther.	Installing ordnance machinery and material in shops.
Lieut. Le Roy M. Garrett	4-inch, 5-inch, 6-inch, and 7-inch guns, mounts, and accessories.
Lieut. A. L. Willard.....	In charge of drafting room and photography.
Lieut. W. D. MacDougal	3-inch guns, mounts and accessories, fuses; fuse, shell, and pressure gauges, firing locks, shell tongs, and shell caps.
Lieut. W. H. Buck	Executive officer, seaman's quarters, instruction of seamen gunners.
Lieut. J. M. Reeves.....	Torpedoes and mounts, all 1-pounder, 3-pounder, and 6-pounder guns, mounts, and accessories.

BUREAU OF ORDNANCE.

Officers performing ordnance duty—Continued.

Name and station.	Duties.
<i>Navy-yard, Washington, D. C.—Continued.</i>	
Lieut. Commander W. B. Caperton.	8-inch to 13-inch guns, mounts, and accessories.
Lieut. A. S. Norton.....	Cartridge cases, ammunition boxes, powder tanks, drill shell, and dummy cartridges; all work for and miscellaneous work.
Gunner Samuel Chiles	Charge of Bellevue magazine; gunner's division, invoice allowance lists, miscellaneous equipment; shell house, laboratory (not chemical), gun and mount storehouse, and such articles as the superintendent may direct.
<i>Navy-yard, Norfolk, Va.</i>	
Commander W. H. Everett	Inspector of ordnance.
Gunner W. A. Cable	Assistant to inspector of ordnance.
Gunner J. H. Lohman	In charge of naval magazine, St. Juliens Creek
Gunner P. Hill	Assistant to inspector of ordnance.
<i>Navy-yard, League Island, Pa.</i>	
Commander F. H. Delano.....	Inspector of ordnance.
Gunner C. S. Vanderbeck.....	Assistant inspector of ordnance in charge of magazine, Fort Mifflin.
Chief Gunner T. M. Johnson.....	Assistant inspector of ordnance.
<i>Navy-yard, New York.</i>	
Commander J. B. Briggs.....	Inspector of ordnance.
Lieut. D. M. Wood	Assistant inspector of ordnance.
Gunner F. H. Whitney.....	In charge of naval magazine, Iona Island, N. Y.
Gunner T. B. Watson	In charge naval magazine, Dover, N. J.
Chief Gunner C. B. Magruder ...	Assistant inspector of ordnance.
Gunner W. E. Whitehead	Do.
Gunner Hans Johnson	Do.
Gunner J. C. McDermott.....	Do.
Gunner W. J. Foley.....	Do.
<i>Navy-yard, Boston, Mass.</i>	
Commander S. W. Very.....	Inspector of ordnance.
Chief Gunner A. A. Phelps.....	Niter depot, Malden.
Gunner D. Lyons	Magazine, Chelsea.
Gunner J. G. Roach.....	Assistant inspector of ordnance.
<i>Navy-yard, Portsmouth, N. H.</i>	
Commander J. K. Cogswell	Inspector of ordnance.
Chief Gunner P. Lynch.....	Assistant inspector of ordnance.
<i>Navy-yard, Mare Island, Cal.</i>	
Commander A. M. McCrackin ...	Inspector of ordnance.
Chief Gunner Wm. Halford	Assistant inspector of ordnance.
Chief Gunner J. R. Ward	Do.
<i>Torpedo station.</i>	
Lieut. Commander F. F. Fletcher.	Inspector of ordnance in charge of station.
Lieut. C. Wells.....	Assistant to inspector in charge.
Lieut. W. Henderson	Do.
Lieut. L. R. Sargent.....	Do.
Ensign H. P. Perrill.....	Do.
Surgeon R. M. Kennedy	Medical officer.
Paymaster W. B. Wilcox.....	Pay officer.
Pharmacist W. H. Huntington...	Assistant to medical officer.
Gunner G. P. Brady.....	Assistant to inspector in charge.
Gunner J. Donald	Do.
Warrant Machinist H. H. Walker.	Do.
Warrant Machinist C. E. Wood...	Do.
Pay Clerk E. F. Delaney	Assistant to pay officer.
<i>Naval Proving Ground, Indian-head, Md.</i>	
Lieut. Jos. Strauss.....	Inspector of ordnance in charge of station.
Lieut. J. B. Patton	Assistant inspector of ordnance.
Lieut. Ralph Earle	Do.
Pharmacist S. W. Douglass.....	In charge of dispensary.
Gunner S. Jacobs.....	Assistant to inspector.
Pay Clerk J. J. Gering.....	In charge of accounts.
<i>Naval Station, Cavite, P. I.</i>	
Lieut. B. C. Decker.....	Inspector of ordnance.
Chief Gunner Wm. Walsh.....	Assistant to inspector of ordnance.
Gunner W. G. Moore	Do.
Gunner C. W. Ljungquist	Do.
Gunner A. C. Kail.....	Do.
Gunner B. H. Cornell	Do.
Gunner J. T. Swift	Do.

B.

Table showing the assignment of guns of main and secondary batteries.

[illegible]

Table showing the assignment of guns of main and secondary batteries—Continued.

Name of vessel.	Type.	Dis- place- ment.	Main battery.										Secondary battery.															
			4-inch.	4.7-inch.	5-inch.		6-inch.		7-inch.	8-inch.	10-inch.	12-inch.	13-inch.	3-inch, 50 calibers.	6-pdr.	3-pdr.		1-pdr. R. F.		1-pdr. auto-matic.		37-millimeter R. C.	Colt auto-matic.		3-inch field gun.	Gatling.		
					R. F.	B. L. R.	R. F.	B. L. R., United States.								B. L. R., English.	R. F.	S. A. R. F.	Heavy.	Light.	Heavy.		Light.	.30 caliber.		.45 caliber.	.30 caliber.	6 millimeters.
Dorothea	Torpedo boat	Tons.												1				2										
Dupont	Gunboat	165												2				4										
Eagle		434												4														
El Cano			4																									
Elfrida																												
Enterprise																												
Ericsson	Torpedo boat	120																										
Essex	Cruiser	1,375	6											4				2										
Este	Tug																											
Farragut	Torpedo boat	272												4														
Fern																												
Florida	Monitor No. 9	2,700	4															2										
Fortune																												
Foote	Torpedo boat	142																3										
Fox	do	152																3										
Franklin	Cruiser	5,170																										
Frolic	Gunboat	607																2										
Galveston	Protected cruiser No. 17.	2,500																										
Georgia	Battle ship No. 15.	13,500												10														
Glacier																												
Gloucester	Gunboat	786																										
Goldsborough	Torpedo boat	248																										
Guadoqui	Gunboat	42																										
Gwin	Torpedo boat	46																										
Hannibal	Collier	4,291																										
Hartford	Cruiser	2,790																										
Hawk	Gunboat	1,875												13														
Helena	do	1,392	8																									
Hercules	Tug	198																										
Hist	Gunboat	472																										
Holland	Submarine boat																											

Table showing the assignment of guns of main and secondary batteries—Continued.

Name of vessel.	Type.	Dis- place- ment.	Main battery.										Secondary battery.											
			5-inch.		6-inch.		7-inch.	8-inch.	10-inch.	12-inch.	13-inch.	3-inch, 50 calibers.	6-pdr.		3-pdr.	1-pdr. R. F.		1-pdr. auto- matic.		37-millimeter R. C.	Colt auto- matic.		Gatling.	
			R. F.	B. L. R.	R. F.	B. L. R., United States.	B. L. R., English.							R. F.	S. A. R. F.	R. F.	S. A. R. F.	Heavy.	Light.		.30 caliber.	.45 caliber.	3-inch field gun.	
Minneapolis	Protected cruiser	Tons, 7,375							1						12			2			2		1	
Minnesota	Cruiser	4,700																						
Missouri	Battle ship No. 11	12,500			16				4				6			8	2	4			2		2	
Modoc	Tug	241																						
Monadnock	Cruiser		6												4				2					
Monocacy	Monitor	3,990	2						4						2		2							
Monongahela	Gunboat	1,370																						
Montauk	Sailing ship	2,100	6												4									
Montevideo	Monitor	1,875																			2		1	
Montgomery	do.								2	2					6		4				2			
Morris	Cruiser	2,089	10												6		2							
Nahant	Torpedo boat	105															4							
Nashua	Monitor	1,875																						
Nantuxet	Collier	4,825																						
Narkeeta	Monitor	1,875																						
Nashville	Tug	192																						
Nebraska	Gunboat	1,371	8												4		2	4						
Nero	Battle ship No. 14	12,000			12				4				12			12	4	4			6		2	
Nevada	Collier	4,925													1									
Newark	Monitor No. 8	2,700	4									2			3		2	4			2		2	
New Hampshire	Protected cruiser	4,098			12								6			6	4	4			4		2	
New Jersey	Sailing ship	4,150																						
New Orleans	Battle ship No. 16	13,500			12				8			4	12		10		4	4			6		2	
Newport	Protected cruiser	3,437		4				6							4		4				2			
New York	Gunboat	1,000	6												4		2				1		2	
Nezinscot	Armored cruiser	8,200	12						6						8		2	2			4			
Nicholson	Tug	156																						
Nina	Torpedo boat	174															3							
Nipsic	Tug	357																						
O'Brien	Cruiser	1,375																						
Ohio	Torpedo boat	1,174															3							
	Battle ship No. 12	12,500			16				4				6			8	2	4			2		2	

Ship Name	Type	Displacement	Speed	Range	Armament	Complement	Notes
Olympia	Protected cruiser	5,870	10	4,000	10 12	10	
Cruiser		2,400					
Omaha	Gunboat	150					
Oneya	Battle ship	10,288	4				
Oregon	Tug	571					
Osecola	Launch						
Ondina	Gunboat	204					
Pampanga	do	142					
Panay	do	4,260	2				
Panther	Cruiser	201	6				
Paragua	Gunboat	420					
Paul Jones	Torpedo-boat destroyer	275					
Pawnee	Tug	225					
Pawtucket	do						
Penacook	do	13,500					
Pennsylvania	Armored cruiser No. 4	3,000	1				
Pensacola	Sailing ship	489					
Peoria	Gunboat	420					
Perry	Torpedo-boat destroyer	892	4				
Petrel	Gunboat						
Petrelita	Tug	4,342					
Philadelphia	Cruiser	550	12				
Pinta	Gunboat	631					
Piscataqua	Tug	168					
Plunger	Submarine boat	3,085					
Pompey	Collier	401					
Pontiac	Tug						
Porter	Torpedo boat	1,125					
Portsmouth	Sailing ship						
Potomac	Tug	194					
Powhatan	do	6,872	8				
Prairie	Cruiser	420					
Preble	Torpedo-boat destroyer	1,000	6				
Princeton	Gunboat	6,040	4				
Puritan	Monitor	350					
Quiros	Gunboat	6,206					
Rainbow	Distilling ship	3,213	11				
Raleigh	Protected cruiser	1,020	6				
Ranger	Cruiser	66					
Rapido	Tug	3,030					
Relia Mercedes	Protected cruiser	137					
Restless	Gunboat		12				
Rhode Island	Battle ship No. 17	2,700					
Richmond	Cruiser	142					
Rodgers	Torpedo boat	182					
Rowan	do						
Samar	Gunboat	201					
Samoset	Tug	225					
Sandoval	Gunboat	100					
San Francisco	Protected cruiser	4,098	12				
Saratoga	Sailing ship	1,025					

Also four 8-inch B. L. R.

Table showing the assignment of guns of main and secondary batteries—Continued.

Name of vessel.	Type.	Dis- place- ment.	Main battery.										Secondary battery.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			4-inch.	4.7-inch.	5-inch.		6-inch.		7-inch.	8-inch.	10-inch.	12-inch.	13-inch.	3-inch, 50 calibers.	6-pdr.		3-pdr.		1-pdr. R. F.		1-pdr. auto- matic.		'Colt auto- matic.		3-inch field gun.	Gatling.		47-millimeter R. C.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
					R. F.	B. L. R.	R. F.	P. L. R., United States.							B. L. R., English.	R. F.	S. A. R. F.	R. F.	S. A. R. F.	Heavy.	Light.	30 caliber.	6 millimeters.	45 caliber.		30 caliber.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Saturn	Collier.	Tons. 6,220													1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

a Three 15-inch pneumatic dynamite guns.

B¹.

Table showing torpedo armament of vessels.

Name.	Torpedoes.			Tubes.	
	No.	Kind.	Mark.	No.	Kind.
BATTLE SHIPS.					
Texas	4	Whitehead, 3.55 meter	{ II III }	2	Lower deck, 3.55 meter.
Indiana	6	do	III	2	Do.
Massachusetts	6	do	III	3	Do.
Oregon	6	do	{ I III }	3	Do.
Iowa	8	Howell, 14.2"	I	4	Lower deck, 14.2" Howell.
Kearsarge	8	Whitehead, British Admiralty, 5 meter.	IA	4	Lower deck, 5 meter.
Kentucky	8	Whitehead, 5 meter	I	4	Do.
Illinois	8	Whitehead, British Admiralty, 5 meter.	IA	4	Do.
Alabama	8	Whitehead, 5 meter	I	4	Do.
Alabama	8	Whitehead, British Admiralty, 5 meter.	IA	4	Do.
Wisconsin	8	Whitehead, 5 meter	I	4	Do.
Maine	6	do	II	2	Elswick (W) submerged
Missouri	6	do	II	2	Do.
Ohio	6	do	II	2	Do.
CRUISERS.					
Brooklyn	8	Whitehead, 3.55 meter	II	4	Lower deck, 3.55 meter.
New York	4	do	{ II III }	2	Do.
Columbia	2	do	{ II III }	4	Do.
Minneapolis	2	do	{ II III }	4	Do.
DESTROYERS.					
Bainbridge	4	Whitehead, 5 meter	I	2	Central pivot, 5 meter.
Barry	4	do	I	2	Do.
Chauncey	4	do	I	2	Do.
Dale	4	do	I	2	Do.
Decatur	4	do	I	2	Do.
Hopkins	4	do	I	2	Do.
Hull	4	do	I	2	Do.
Lawrence	4	do	I	2	Do.
Macdonough	4	do	I	2	Do.
Paul Jones	4	Whitehead, British Admiralty, 5 meter.	IA	2	Do.
Perry	4	Whitehead, 5 meter	I	2	Do.
Preble	4	do	I	2	Do.
Stewart	4	do	I	2	Do.
Truxton	4	Whitehead, British Admiralty, 5 meter.	IA	2	Do.
Whipple	4	Whitehead, 5 meter	I	2	Do.
Whipple	4	Whitehead, British Admiralty, 5 meter.	IA	2	Do.
Worden	4	Whitehead, 5 meter	I	2	Do.
Worden	4	Whitehead, British Admiralty, 5 meter.	IA	2	Do.
Worden	4	Whitehead, 5 meter	I	2	Do.
TORPEDO BOATS.					
Cushing	3	Whitehead, 3.55 meter	II	3	Central pivot, 3.55 meter.
Eriesson	2	do	III	2	Do.
Rodgers	4	do	{ II III }	3	Do.
Foote	4	do	{ II III }	3	Do.
Winslow	4	do	{ II III }	3	Do.
Porter	4	do	{ II III }	3	Do.
Dupont	4	do	{ II III }	3	Do.
Rowan	4	do	{ II III }	3	Do.
Dahlgren	3	Whitehead, 5 meter	I	2	Central pivot, 5 meter.
T. A. M. Craven	3	do	I	2	Do.

BUREAU OF ORDNANCE.

Table showing torpedo armament of vessels—Continued.

Name.	Torpedoes.			Tubes.	
	No.	Kind.	Mark.	No.	Kind.
TORPEDO BOATS— continued.					
Farragut	4	Whitehead, 5 meter	I	2	Central pivot, 5 meter.
Davis	4	do	I	3	Do.
Fox	4	Whitehead, 3.55 meter	I	3	Do.
Morris	4	do	I	3	Do.
Talbot	2	do	III	2	Central pivot, 3.55 meter.
Gwin	2	do		2	Do.
Mackenzie	2	do	III	2	Do.
McKee	2	do		2	Do.
Stringham	4	Whitehead, 5 meter	I	2	Central pivot, 5 meter.
Goldsborough	4	do	I	2	Do.
Bailey	4	do	I	2	Do.
Somers	3	Whitehead, 3.55 meter	II	2	Central pivot, 3.55 meter.
Bagley	5	do	III	3	Do.
Barney	5	do		3	Do.
Biddle	5	do	III	3	Do.
Blakely	5	do	III	3	Do.
De Long	5	do	III	3	Do.
Nicholson	6	do	III	3	Do.
O'Brien	5	do	III	3	Do.
Shubrick	5	do	III	3	Do.
Stockton	5	do	III	3	Do.
Thornton	5	do	III	3	Do.
Tingey	5	do	III	3	Do.
Wilkes	5	do	III	3	Do.
<i>Submarines.</i>					
Holland	3	Whitehead, 3.55 meter	I	1	Bow.
Plunger	3	do	I	1	Do.
Adder	5	do	I	1	Do.
Grampus	5	do	I	1	Do.
Moccasin	5	do	I	1	Do.
Pike	5	do	I	1	Do.
Porpoise	5	do	I	1	Do.
Shark	5	do	I	1	Do.

C.

DETAILED ESTIMATES FOR THE FISCAL YEAR ENDING JUNE 30, 1904.

DEPARTMENT OF THE NAVY,
BUREAU OF ORDNANCE,
Washington, D. C., August 29, 1902.

SIR: 1. The Bureau has the honor to request authority to include in its annual estimates for the fiscal year ending June 30, 1904, under the head of "Salaries, Bureau of Ordnance," one ordnance engineer, mechanical draftsman and computer, at a salary of \$3,000 per annum; and also under the head of "Civil establishment" at the Naval Gun Factory, a like position, at the same salary.

2. The necessity for a permanent civilian employee of superior attainments in the Bureau of Ordnance and at the Naval Gun Factory is very pressing. The Bureau is charged with the duty of designing guns, mounts, and turret fixtures, with all of their intricate details, upon the successful operation of which the efficiency of the Navy depends. Original work, requiring great ingenuity and a full knowledge of the higher mathematics, mechanics, ballistics, and other sciences, must be proceeded with as new ships are designed and contracted for, and improvements should be made as new types are

brought out, and the older vessels should, as far as circumstances permit, be improved in their ordnance outfits as opportunity permits. All such work must originate at the Bureau and be perfected at the Naval Gun Factory, and for its performance the Bureau has been dependent upon the services of such officers of the Navy as it could procure by detail from time to time.

3. Very few officers possess the necessary attainments, and if the Bureau is fortunate enough to obtain the services of those who do, the exigencies of the service require that they shall perform their tour of sea duty whenever necessary. So far as many of the duties now performed by officers in the Bureau at the Naval Gun Factory are concerned, this is unimportant, and it is in fact desirable that there should be a constant rotation of duty, in order that as many officers as possible should acquire some knowledge of ordnance matters, but when it comes to the more important matters, such as the designing of guns and mounts, it cripples the Bureau seriously to lose the services of an officer who is proficient in such matters. It takes fully a year before an officer possessing a decided aptitude and considerable knowledge of the subject can become of real value to the Bureau in the matters referred to, and it is becoming more difficult every year to obtain or retain the services of officers specially well qualified to perform certain duties pertaining to this Bureau, for which reason, and to avoid amateurish work in original designs, which can but lead to waste of money and valuable time, and to improve, as far as practicable, the ordnance outfits of the vessels of the Navy, both new and old, the Bureau has concluded, after mature deliberation, that the interests of the Department require the services of two good ordnance engineers, as above stated.

4. These employees should be graduates of technical schools and should possess a thorough knowledge of calculating strains and stresses in ordnance construction and fixing the proper dimensions of parts of guns, gun carriages, projectiles, etc., calculations in exterior and interior ballistics, mechanical drawing and designing, practical application of the sciences of electricity and optics, architecture of shop-building, installation, testing and superintending the operation of steam and electrically operated machinery to meet given conditions, etc., and a good general knowledge of modern ordnance.

5. Such persons are few in number, and in private life would command a much greater compensation than that recommended by the Bureau.

6. As the Department is aware, there is no ordnance corps in the Navy, but that all guns, mounts, and ordnance appliances now in use have been designed by such line officers as could be obtained who had an aptitude for and sufficient ability to perform such work, and it is only fair to say that the work has been well done. The duties of the Bureau have greatly increased in every respect, and officers have not the time, even supposing they have the talent, to devote to designing and to making long and intricate calculations, being occupied in the performance of the daily current work of the Bureau, which must be attended to every day. Many important matters with reference to mechanical details, worthy of long and careful consideration, often have to be summarily disposed of without it simply because there is no time and because the work must be proceeded with.

7. If the Department expects to get the best that can be procured,

REPORT

OF THE

CHIEF OF THE BUREAU OF CONSTRUCTION AND REPAIR.

DEPARTMENT OF THE NAVY,
BUREAU OF CONSTRUCTION AND REPAIR,
Washington, D. C., September 26, 1902.

SIR: In compliance with the Department's instructions, I have the honor to submit the report of the Bureau for the fiscal year ending June 30, 1902, and estimates for appropriations required for the fiscal year ending June 30, 1904.

The estimate marked "A" is for the salaries of certain clerical employees of the Bureau. An estimate for one additional clerk of class 3 is the only increase over the force as at present appropriated for.

The estimate marked "B" is for the construction and repair of vessels at navy-yards and on foreign stations, the purchase of stores, materials, machinery, tools of all kinds, and the proper performance of all general work for the Navy in the line of construction and repair. The demands upon this appropriation naturally increase in proportion to the growth of the Navy and the increased number of naval stations to be maintained.

The estimates marked "B. Special" are for the improvement of construction plants at the several navy-yards and naval stations, and are in amount barely sufficient to provide for the necessary modifications of existing plants to render them efficient and modern and to provide new installations already contemplated.

The estimate marked "B 1. Special" is for a steam ammunition lighter for use at Cavite, P. I., and is requested by the Bureau of Ordnance.

The estimates marked "C" are for the pay of the regular clerical force at the several navy-yards carried on the "Civil establishment."

The estimate marked "D" is for the amounts required by this Bureau under appropriation "Increase of the Navy, Construction and Machinery," for new vessels authorized by Congress to June 30, 1903.

The estimates marked "D. Special" are for vessels for the training service.

ESTIMATES, APPROPRIATION "CONSTRUCTION AND REPAIR," 1903-4.

Estimates of appropriations required for the fiscal year ending June 30, 1904, by the Bureau of Construction and Repair, Navy Department.

Detailed objects of expenditures and explanations.	Estimated amount required for each detailed object.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for current fiscal year ending June 30, 1903.
A. Salaries.			
1 chief clerk (appropriated).....	\$2,000.00		
2 clerks of class 3 (appropriated).....	3,200.00		
1 clerk of class 3 (submitted).....	1,600.00		
1 assistant draftsman (appropriated).....	1,400.00		
2 clerks of class 1 (appropriated).....	2,400.00		
1 assistant messenger (appropriated).....	720.00		
1 laborer (appropriated).....	660.00		
		\$11,980.00	\$10,380.00
B. Construction and Repair of Vessels.			
For preservation and completion of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; steam steerers, pneumatic steerers, steam capstans, steam windlasses, and all other auxiliaries; labor in navy-yards and on foreign stations; purchase of machinery and tools for use in shops; carrying on work of experimental model tank; designing naval vessels; construction and repair of yard craft, lighters, and barges for use at home stations; wear, tear, and repair of vessels afloat; general care, increase, and protection of the Navy in the line of construction and repair; incidental expenses, such as advertising, freight, foreign postage, telegrams, telephone service, photographing, books, professional magazines, plans, stationery, and instruments for drafting room (appropriated).....	8,000,000.00	8,000,000.00	8,000,000.00
B. Special.—Improvement of Construction Plants.			
For repairs to and improvement of plant at navy-yard, Portsmouth, N. H. (appropriated).....	20,000.00	20,000.00	30,000.00
For repairs to and improvement of plant at navy-yard, Boston, Mass. (appropriated).....	50,000.00	50,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, New York, N. Y. (appropriated).....	50,000.00	50,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, League Island, Pa. (appropriated).....	30,000.00	30,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Norfolk, Va. (appropriated).....	30,000.00	30,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Mare Island, Cal. (appropriated).....	30,000.00	30,000.00	50,000.00
For repairs to and improvement of plant at navy-yard, Puget Sound, Washington (appropriated).....	75,000.00	75,000.00	75,000.00
For construction plant at naval station, New Orleans, La. (appropriated).....	25,000.00	25,000.00	15,000.00
B 1. Special.—Construction and Repair of Vessels.			
For 1 steel steam ammunition lighter, with all fittings complete, for use at naval station, Cavite, P. I.—requested by the Bureau of Ordnance (submitted).....	30,000.00	30,000.00	.....
C. Civil Establishment.			
At navy-yard, Portsmouth, N. H.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....
2 writers, at \$1,017.25 each (appropriated).....	2,034.50	.....	.....
At navy-yard, Boston, Mass.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....
2 writers, at \$1,017.25 each (appropriated).....	2,034.50	.....	.....
At navy-yard, New York, N. Y.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....
3 writers, at \$1,017.25 each (appropriated).....	3,051.75	.....	.....
At navy-yard, League Island, Pa.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....
1 writer, at \$1,017.25 (appropriated).....	1,017.25	.....	.....
At navy-yard, Washington, D. C.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....
At navy-yard, Norfolk, Va.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....
2 writers, at \$1,017.25 each (appropriated).....	2,034.50	.....	.....
At naval station, Charleston, S. C.:			
1 clerk to naval constructor (appropriated).....	1,400.00	.....	.....

* Now appropriated for at Port Royal, S. C.

BUREAU OF CONSTRUCTION AND REPAIR.

means of making a monthly comparison between the items of work included in the contract for the contract-built ship and for the navy-yard-built ship. The cost of items which are furnished by the Government in any case, whether a contract-built or a navy-yard-built ship, will be shown in the usual course as heretofore, but will also be shown in the monthly consolidated statement for each ship for purposes of comparison.

17. The Bureau recommends that the Department direct all bureaus to issue instructions for the preparation of monthly reports of expenditures in accordance with the above scheme, to be transmitted by them monthly to the Bureau of Supplies and Accounts, and that the Bureau of Supplies and Accounts be directed to prepare and submit to the Department quarterly consolidated statements including all the reports of expenditures and the monthly reports received directly from general storekeepers and yard paymasters (for superintendence of officers, freights, and materials in stock for the ship), such consolidated statement to be forwarded to the Department via the bureaus, which will thus be able to note contents and make any comment upon the consolidated report which may seem desirable.

Very respectfully,

F. T. BOWLES,
Chief Constructor, U. S. Navy, Chief of Bureau.

The SECRETARY OF THE NAVY.

VESSELS SURVEYED.

The vessels given in the table below have been surveyed and repairs authorized during the past fiscal year:

Name.	Where surveyed.	Date of reports on survey.	Estimated cost of repairs.
Alliance.....	Norfolk.....	Dec. 28, 1901, to Jan. 20, 1902.....	\$3,889.00
Amphitrite.....	Boston.....	Dec. 1 to 20, 1901.....	42,050.00
Baltimore.....	New York.....	July 2, 1902.....	12,740.00
Bennington.....	Mare Island.....	Sept. 5 to 15, 1901.....	137,600.00
Brooklyn.....	New York.....	May 13, 1902.....	12,816.00
Buffalo.....	Norfolk.....	June 4, 1902.....	6,939.58
Cæsar.....	do.....	Jan. 2, 1902.....	4,526.00
Castine.....	League Island.....	Nov. 23, 1901.....	49,186.00
Concord.....	Mare Island.....	Mar. 4 to 27, 1902.....	145,315.00
Culgoa.....	Boston.....	Dec. 17 to 21, 1901.....	82,585.00
Don Juan de Austria..	Cavite.....	May 13, 1902.....	^a 7,000.00
Eagle.....	Portsmouth.....	July 11, 1901.....	3,677.00
Essex.....	Norfolk.....	June 23, 1902.....	7,417.34
Fortune.....	Boston.....	July 10 to 13, 1901.....	3,253.00
Hartford.....	New York.....	Dec. 6, 1901.....	11,258.00
Helena.....	Shanghai.....	Apr. 28, 1902.....	^b 1,612.00
Indiana.....	New York.....	Oct. 11, 1901.....	8,806.00
Do.....	do.....	May 17, 1902.....	9,882.00
Kearsarge.....	do.....	June 14, 1902.....	5,742.00
Marietta.....	Portsmouth.....	Sept. 28, 1901.....	10,760.00
Do.....	New York.....	Apr. 30, 1902.....	6,324.00
Massachusetts.....	do.....	Oct. 31, 1901.....	12,798.50
Do.....	do.....	June 12, 1902.....	8,716.00
Mayflower.....	do.....	Aug. 15, 1901.....	11,139.00
Miantonomoh.....	League Island.....	Sept. 25, 1901.....	37,632.00
Minneapolis.....	do.....	Apr. 5, 1902.....	14,765.00
Monongahela.....	New York.....	July 9, 1901.....	5,711.00
Do.....	do.....	Apr. 24, 1902.....	5,374.50
Mohican.....	Mare Island.....	Oct. 19, 1901.....	4,265.00
Oregon.....	Bremerton.....	Aug. 10, 1901.....	310,660.00
Pampanga.....	Cavite.....	June 3, 1902.....	31,940.90
Petrel.....	Mare Island.....	Sept. 9 to Oct. 1, 1901.....	^c 78,050.00
Philadelphia.....	do.....	Nov. 29, 1901.....	9,109.00
Princeton.....	Cavite.....	Apr. 5, 1902.....	^d 8,150.00
Puritan.....	Norfolk.....	Jan. 17 to 25, 1902.....	29,404.00
Ranger.....	Mare Island.....	Oct. 26, 1901.....	4,600.00
Restless.....	New York.....	Jan. 6, 1902.....	9,890.00
Scorpion.....	Boston.....	Aug. 1 to 3, 1901.....	5,753.00
Solace.....	Mare Island.....	Sept. 3 to 6, 1901.....	19,215.00
Sylph.....	League Island.....	Aug. 14, 1901.....	3,865.00
Terror.....	do.....	Nov. 20, 1901.....	16,163.00
Vigilant.....	Mare Island.....	Aug. 3, 1901.....	4,955.00
Vixen.....	Portsmouth.....	July 30, 1901.....	5,575.00
Wisconsin.....	Bremerton.....	Sept. 14, 1901.....	4,200.00
Yankton.....	Portsmouth.....	June 25, 1902.....	7,115.00

^a Mexican.

^b United States currency.

^c About.

^d Gold.

The repairs and alterations to vessels made at navy-yards and stations are described in detail in the reports of naval constructors, appended.

VESSELS FOR THE TRAINING SERVICE.

Acting in cooperation with the authorities of the naval training service, this Bureau has prepared tentative designs for a sailing training vessel of about 1,800 tons displacement, the length being 176 feet, mean draft 19 feet 6 inches; to be full rigged, built of steel, with double bottom, enough water-tight subdivision for safety, with sufficient boiler power to distill water and provide for ventilation and sanitary appliances, and with sufficient room to comfortably carry a crew of 300 men.

In compliance with the authority of the Department, estimates are submitted for two such vessels, to cost \$375,000 each.

The Bureau has also designed, to meet the wishes of those engaged in the training service, a small wooden sailing brig for use in connection with the training stations. The design is for a vessel of about 350 tons displacement and a mean draft of 9 feet 4½ inches; length between perpendiculars, 108 feet; extreme breadth, 30 feet.

The Bureau recommends, in accordance with the Department's approval, the construction of one of these brigs at an estimated cost of \$50,000.

STANDARDIZATION OF FITTINGS.

Substantial and encouraging progress has been made in the standardization of ship fittings. Private shipbuilders having contracts for naval vessels, on their own initiative, organized a conference upon this subject, and from time to time during the past year have submitted plans of fittings which they recommended for adoption as standards. These plans have been subjected to criticism of the principal navy-yards and the Bureau, and after revision by the shipbuilders have been developed into final form and issued by the Bureau. During the past year 44 such standards have been issued, as shown in the following list:

- No. 1. Water-tight manhole, 23 by 15 inches (high coaming).
- No. 2. Water-tight manhole, 23 by 15 inches (low coaming).
- No. 3. Water-tight door, 5 feet 6 inches by 2 feet 2 inches.
- No. 4. Water-tight door, 5 by 2 feet.
- No. 5. Water-tight door, 4 by 2 feet.
- No. 6. Water-tight door, 3 feet 6 inches by 2 feet.
- No. 7. Water-tight door, 2 feet 6 inches by 1 foot 6 inches.
- No. 8. Air port, 11½ inches.
- No. 9. Coal scuttles, 24 inches.
- No. 10. Coal scuttles, 18 inches.
- No. 11. Deck light, 9 inches.
- No. 12. Warping and towing bitts, 14 inches.
- No. 13. Warping and towing bitts, 9 inches.
- No. 14. Two and one-half inch dresser lift pump.
- No. 15. Two and one-half inch bulkhead lift and force pump.
- No. 16. Flush water-tight hatch, 30 by 30 inches.
- No. 17. Hammock hook.
- No. 18. Raised water-tight hatch, 30 by 30 inches.
- No. 19. Scupper in way of casemate armor.
- No. 20. Pipe flanges.
- No. 21. Double companion hatch, 6 feet 2 inches by 6 feet 2 inches.
- No. 22. Scupper forward or abaft casemate armor.
- No. 23. Single companion hatch, 6 feet 2 inches by 3 feet.

BUREAU OF CONSTRUCTION AND REPAIR.

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Detailed statement of shipments for each vessel from the eastern and western districts for the fiscal year ending June 30, 1902—Continued.

Name of vessel, etc.	Eastern district.	Western district.	Total.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Pennsylvania	775,031	8,101,372	8,876,403
Rhode Island	195,565	6,290,687	6,486,252
South Dakota	303,396	7,086,231	7,389,627
St. Louis	28,331	1,995,258	2,023,589
Tacoma		60,694	60,694
Virginia	31,532	3,005,535	3,037,067
West Virginia	470,163	8,907,172	9,377,335
Monitors	119,667		119,667
Torpedo boats and destroyers	12,073		12,073
Submarine boats	2,236		2,236
Navy-yard contracts and requisitions	16,864,863	6,082,273	22,947,136
Miscellaneous		7,463,112	7,463,112
Reinspected at galvanizing plant	369,047		369,047
Total	22,118,018	101,328,073	123,446,091

Orders for material requiring inspection were distributed among the following manufacturers:

EASTERN DISTRICT.

American Iron and Steel Manufacturing Company	Reading, Pa.
Carpenter Company	Do.
American Iron and Steel Manufacturing Company	Lebanon, Pa.
Central Iron and Steel Company	Harrisburg, Pa.
Pennsylvania Steel Company	Steelton, Pa.
Phoenix Iron Company	Phoenixville, Pa.
Worth Brothers Company	Coatesville, Pa.
Alan Wood Company	Conshohocken, Pa.
J. Wood Brothers Company	Do.
Midvale Steel Company	Nicetown, Pa.
Philadelphia Forge Company	Tacony, Pa.
Tioga Steel and Forge Company	Tioga, Pa.
Pennsylvania Galvanizing Company	Philadelphia, Pa.
Penn Steel Casting and Machine Company	Chester, Pa.
Seaboard Steel Casting Company	Do.
American Steel Casting Company	Thurlow, Pa.
Diamond State Steel Company	Wilmington, Del.
McCullough Iron Company	Do.
Benjamin Atha & Illingworth	Newark, N. J.
Passaic Rolling Mill Company	Paterson, N. J.

WESTERN DISTRICT.

Homestead Steel Works	Munhall, Pa.
Union Mills	Pittsburg, Pa.
Carbon Steel Company	Do.
American Steel and Wire Company (Schoenberger Works)	Do.
Park Steel Company	Do.
Union Steel Casting Company	Do.
American Steel Hoop Company	Do.
Pressed Steel Car Company	Do.
Jones and Laughlins'	Do.
National Works	McKeesport, Pa.
Cleveland City Forge and Iron Company	Cleveland, Ohio.
Upson Nut Company	Do.
Champion Rivet Company	Do.
Cleveland Punch and Shear Works	Do.
Monongahela Iron and Steel Company	Hays Station, Pa.
Cambria Steel Company	Johnstown, Pa.
Illinois Steel Company	Chicago, Ill.
Duquesne Steel Works	Duquesne, Pa.
National Tube Works	Elwood City, Pa.
Sharon Steel Company	Sharon, Pa.

* * * * *

ARMORED STEEL VESSELS—

	Name.	Type.	Rig.	By whom and where built or building.	
1	Alabama ^a	Seagoing coast-line battle ship.	Two military masts.	Wm. Cramp & Sons, Philadelphia, Pa.	1
2	Connecticut ^a ...	2 13" barbette turrets. Seagoing battle ship.....	Two military masts.	Navy-Yard, New York	2
3	Georgia ^a	Seagoing coast-line battle ship. 2 12" barbette turrets. 2 8" turrets superposed.	Two military masts.	Bath Iron Works, Bath, Me ..	3
4	Illinois ^a	2 8" barbette turrets. Seagoing coast-line battle ship.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	4
5	Indiana	2 13" barbette turrets. Seagoing coast-line battle ship.	One military mast.	Wm. Cramp & Sons, Philadelphia, Pa.	5
6	Iowa ^a	2 13" barbette turrets. 4 8" barbette turrets. Seagoing coast-line battle ship.	One military mast.	Wm. Cramp & Sons, Philadelphia, Pa.	6
7	Kearsarge ^a	2 12" barbette turrets. 4 8" barbette turrets. Seagoing coast-line battle ship.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	7
8	Kentucky ^a	2 13" barbette turrets. 2 8" turrets superposed. Seagoing coast-line battle ship.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	8
9	Louisiana ^a	2 13" barbette turrets. 2 8" turrets superposed. Seagoing battle ship.....	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	9
10	Maine ^a	Seagoing coast-line battle ship. 2 12" barbette turrets.	Two military masts.	Wm. Cramp & Sons, Philadelphia, Pa.	10
11	Massachusetts ...	Seagoing coast-line battle ship. 2 13" barbette turrets. 4 8" barbette turrets.	One military mast.	Wm. Cramp & Sons, Philadelphia, Pa.	11
12	Missouri ^a	Seagoing coast-line battle ship. 2 12" barbette turrets.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	12
13	Nebraska ^a	Seagoing coast-line battle ship. 2 12" barbette turrets. 2 8" turrets superposed.	Two military masts.	Moran Bros., Seattle, Wash ..	13
14	New Jersey ^a	2 8" barbette turrets. Seagoing coast-line battle ship. 2 12" barbette turrets. 2 8" turrets superposed.	Two military masts.	Fore River S. & E. Co., Quincy, Mass.	14
15	Ohio ^a	2 8" barbette turrets. Seagoing coast-line battle ship. 2 12" barbette turrets.	Two military masts.	Union Iron Works, San Francisco, Cal.	15
16	Oregon	Seagoing coast-line battle ship. 2 13" barbette turrets. 4 8" barbette turrets.	One military mast.	Union Iron Works, San Francisco, Cal.	16
17	Rhode Island ^a ..	Seagoing coast-line battle ship. 2 12" barbette turrets. 2 8" turrets superposed.	Two military masts.	Fore River S. & E. Co., Quincy, Mass.	17
18	Virginia ^a	2 8" barbette turrets. Seagoing coast-line battle ship. 2 12" barbette turrets. 2 8" barbette turrets.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	18
19	Wisconsin ^a	Seagoing coast-line battle ship. 2 8" turrets superposed. 2 13" barbette turrets.	Two military masts.	Union Iron Works, San Francisco, Cal.	19

^a Fitted as a flagship.

FIRST-CLASS BATTLE SHIPS.

	Condition or service, June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.	Tonnage.		Type of engines and boilers.	
		Length on load water line.	Extreme breadth.	Mean draft.	Displacement.		Gross.	Net for Suez Canal.		
1	North Atlantic Station.	<i>Ft. in.</i> 368 0	<i>Ft. in.</i> 72 2½	<i>Ft. in.</i> 23 6	<i>Tons.</i> <i>b</i> 11,565	<i>Tons.</i> <i>c</i> 12,170	<i>Tons.</i> 6,802.12	.....	Twin screw vertical triple expansion; Scotch.	1
2	Completing plans.	450 0	76 10	24 6	16,000	.....	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	2
3	Building.....	435 0	76 2½	23 9	14,948	.....	.....	.....	Twin screw vertical triple expansion; Niclausse.	3
4	European Station.	368 0	72 2½	23 6	<i>b</i> 11,565	<i>c</i> 12,170	6,802.12	.....	Twin screw vertical triple expansion; Scotch.	4
5	Naval Academy cadet practice.	348 0	69 3	24 0	10,288	11,403	5,591.77	3,797.64	Twin screw vertical triple expansion; Scotch.	5
6	South Atlantic Station.	360 0	72 2½	24 0	11,340	12,445	6,294.76	.....	Twin screw vertical triple expansion; Scotch.	6
7	North Atlantic Station.	368 0	72 2½	23 6	11,540	12,905	7,087.13	4,521.73	Twin screw vertical triple expansion; Scotch.	7
8	Asiatic Station.	368 0	72 2½	23 6	11,540	12,905	7,087.13	4,521.73	Twin screw vertical triple expansion; Scotch.	8
9	Completing plans.	450 0	76 10	24 6	16,000	.....	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	9
10	Building.....	388 0	72 2½	23 6	12,300	<i>c</i> 13,500	7,384.27	.....	Twin screw vertical triple expansion; Niclausse.	10
11	North Atlantic Station.	348 0	69 3	24 0	10,288	11,403	5,591.77	3,797.64	Twin screw vertical triple expansion; Scotch.	11
12	Building.....	388 0	72 2½	23 6	12,230	<i>c</i> 13,500	7,384.27	.....	Twin screw vertical triple expansion; Thornycroft.	12
13	Building.....	435 0	76 2½	23 9	14,932	.....	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	13
14	Building.....	435 0	76 2½	23 9	14,948	.....	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	14
15	Building.....	388 0	72 2½	23 6	12,508	<i>c</i> 13,500	7,384.27	.....	Twin screw vertical triple expansion; Thornycroft.	15
16	Repairing Puget Sound Naval Station.	348 3½	69 3	24 0	10,242	11,719	5,591.77	3,797.64	Twin screw vertical triple expansion; Scotch.	16
17	Building.....	435 0	76 2½	23 9	14,932	.....	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	17
18	Building.....	435 0	76 2½	23 9	14,948	.....	.....	.....	Twin screw vertical triple expansion; Niclausse.	18
19	Pacific Station.	368 1	72 2½	23 6	11,564	12,571	6,802.12	.....	Twin screw vertical triple expansion; Scotch.	19

b With two-thirds of ammunition and two-thirds of stores.*c* Estimated.

ARMORED STEEL VESSELS—

	Name.	Speed on trial.	Indicated horse-power on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity (43 cubic feet per ton).	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
		<i>Knots.</i>		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Ft. in.</i>	<i>Knots.</i>	
1	Alabama.....	17.103	11,366	11,570	47.75	800	a1,200 b1,365	25 0	.....	1
2	Connecticut ..	c18	c16,500	c16,000	c63.16	1000	a2,200	.....	.....	2
3	Georgia.....	c19	c19,000	.....	60.90	900	1,900	.....	.....	3
4	Illinois.....	17.449	d12,898	11,540	47.85	800	a1,200 b1,400	25 9½	.....	4
5	Indiana.....	15.547	9,738	10,225	43	400	1,597	27 1½	3,720	5
6	Iowa.....	17.087	12,105	11,363	45.95	625	1,795	26 9½	4,000	6
7	Kearsarge.....	16.816	11,954	11,550	47.74	410	a1,210 b1,591	25 10½	.....	7
8	Kentucky.....	16.897	12,318	11,538	47.74	410	a1,210 b1,591	25 10½	.....	8
9	Louisiana.....	c18	c16,500	c16,000	c63.16	900	a2,200	.....	.....	9
10	Maine.....	c18	c16,000	.....	50.6	1,000	2,000	.....	.....	10
11	Massachusetts	16.21	10,415	10,265	43	400	1,597	27 1½	4,500	11
12	Missouri.....	c18	c16,000	.....	50.35	1,000	2,000	.....	.....	12
13	Nebraska.....	c19	c19,000	.....	60.9	900	1,900	.....	.....	13
14	New Jersey ...	c19	c19,000	.....	60.9	900	1,900	.....	.....	14
15	Ohio.....	c18	c16,000	.....	51.24	1,000	2,000	.....	.....	15
16	Oregon.....	16.79	11,111	10,250	43	400	1,594	27 1½	5,500	16

a Nominal loose stowage.

b Maximum.

c Estimated.

d Total horsepower.

FIRST-CLASS BATTLE SHIPS—Continued.

	Batteries.			Armor.			
	Main.	Secondary.	Torpedo tubes.	Water-line belt.	Tur- rets.	Bar- bettes.	
				Inches.	Inches.	Inches.	
1	{ 4 18" B. L. R. 14 6" R. F. guns.	{ 16 6-pdr. R. F. 6 1-pdr. R. F. 4 Colts. 2 3" R. F. field. 20 3" R. F.	4 long White- head.	{ Top 16½ Bottom 9½ Water line 13½	14	{ 15 10	1
2	{ 4 12" B. L. R. 8 8" B. L. R. 12 7" B. L. R.	{ 12 3-pdr. semiauto. 8 1-pdr. auto. 2 3" field. 8 machine. 12 3" R. F. G. 12 3-pdr. R. F.	None	{ Top 11 to 4 Bottom 9 to 4	12 8 6	{ 10 6 4	2
3	{ 4 12" B. L. R. 8 8" B. L. R. 12 6" R. F. G.	{ 8 1-pdr. R. F. 2 3" field. 2 machine guns. 6 auto. guns. 16 6-pdr. R. F. 6 1-pdr. R. F.	None	{ Top 11 Bottom 8	12 8 6	{ 10 7½ 6 4	3
4	{ 4 13" B. L. R. 14 6" R. F. guns.	{ 20 6-pdr. R. F. 6 1-pdr. R. F. 4 Colts. 2 3" R. F. field.	4 long White- head.	{ Top 16.956 Bottom 9½ Water line 13½	14	{ 15 10	4
5	{ 4 13" B. L. R. 8 8" B. L. R. 4 6" R. F. guns.	{ 20 6-pdr. R. F. 6 1-pdr. R. F. 2 3" R. F. field.	2 Whitehead....	18	15 6	{ 17 8 6	5
6	{ 4 12" B. L. R. 8 8" B. L. R. 6 4" R. F. guns.	{ 20 6-pdr. R. F. 4 1-pdr. R. F. 4 Colts. 2 3" R. F. field.	4 Howell	14	15 8 7	{ 15 8 6	6
7	{ 4 18" B. L. R. 4 8" B. L. R. 14 5" R. F. guns.	{ 20 6-pdr. R. F. 8 1-pdr. R. F. 4 Colts. 2 3" R. F. field.	4 long White- head.	{ Top 16½ Bottom 9½ Water line 13½	17 15 11 9	{ 15 12½	7
8	{ 4 13" B. L. R. 4 8" B. L. R. 14 5" R. F. guns.	{ 20 6-pdr. R. F. 8 1-pdr. R. F. 4 Colts. 2 3" R. F. field.	4 long White- head.	{ Top 16½ Bottom 9½ Water line 13½	17 15 11 9	{ 15 12½	8
9	{ 4 12" B. L. R. 8 8" B. L. R. 12 7" B. L. R.	{ 20 3" R. F. 12 3-pdr. semiauto. 8 1-pdr. auto. 2 3" field. 8 machine. 6 3" R. F. G.	None	{ Top 11 to 4 Bottom 9 to 4	12 8 6	{ 10 6 4	9
10	{ 4 12" B. L. R. 16 6" R. F. guns.	{ 8 3-pdr. R. F. 6 1-pdr. R. F. 2 Colts. 2 3" R. F. field.	2 submerged....	{ Top 11 Bottom 7½	12 11	{ 12 8	10
11	{ 4 13" B. L. R. 8 8" B. L. R. 4 6" R. F. guns.	{ 20 6-pdr. R. F. 8 1-pdr. R. F. 2 Colts. 6 3" R. F. G. 8 3-pdr. R. F.	2 Whitehead .	18	15 6	{ 17 8 6	11
12	{ 4 12" B. L. R. 16 6" R. F. guns.	{ 6 1-pdr. R. F. 2 Colts. 2 3" R. F. field. 12 3" R. F. G.	2 submerged....	{ Top 11 Bottom 7½	12 11	{ 12 8	12
13	{ 4 12" B. L. R. 8 8" B. L. R. 12 6" R. F. G.	{ 12 3-pdr. R. F. 8 1-pdr. R. F. 2 3" field. 2 machine guns. 6 auto. guns. 12 3" R. F. G.	None	{ Top 11 Bottom 8	12 8 6	{ 10 7½ 6 4	13
14	{ 4 12" B. L. R. 8 8" B. L. R. 12 6" R. F. G.	{ 12 3-pdr. R. F. 8 1-pdr. R. F. 2 3" field. 2 machine guns. 6 auto. guns. 6 3" R. F. G.	None	{ Top 11 Bottom 8	12 8 6	{ 10 7½ 6 4	14
15	{ 4 12" B. L. R. 16 6" R. F. guns.	{ 8 3-pdr. R. F. 6 1-pdr. R. F. 2 Colts. 2 3" R. F. field.	2 submerged....	{ Top 11 Bottom 7½	12 11	{ 12 8	15
16	{ 4 13" B. L. R. 8 8" B. L. R. 4 6" R. F. guns.	{ 20 6-pdr. R. F. 6 1-pdr. R. F. 2 Colts. 2 3" R. F. field.	2 Whitehead....	18	15 6	{ 17 8 6	16

* Above main belt, 6"; superstructure armor, 6".

ARMORED STEEL VESSELS—

	Name.	Speed on trial.	Indicated horse-power on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity (43 cubic feet per ton).	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.
		<i>Knots.</i>		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Ft. in.</i>	<i>Knots.</i>
17	Rhode Island .	^a 19	^c 19,000	.....	60.9	900	1,900	.....	17
18	Virginia	^c 19	^c 19,000	.....	60.9	900	1,900	.....	18
19	Wisconsin.....	17.174	^b 12,822 ^c 12,609	11,500	47.8	800	1,310	25 7	19

^a Estimated.^b Main engines only.^c Total horsepower.

ARMORED STEEL VESSELS—

	Name.	Protective deck.		Water-line protection—obturating material.		Extent of fire-proofed wood.	Complement.		
		Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.		Officers.	Men.	
		<i>Inches.</i>	<i>In.</i>						
1	Alabama	{ Forward 3 .. Aft 4	2½	.....	^a 12,464	All joiner work...	40	552	1
2	Connecticut	{ Forward 2½ .. Aft 2½	1	.....	^a 7,860	{ All joiner work above protective deck.	.....	.....	2
3	Georgia.....	3	1½	.....	^a 21,998	All joiner work above protective deck.	44	668	3
4	Illinois	{ Forward 3 .. Aft 4	2½	.....	^a 12,464	All joiner work...	35	625	4
5	Indiana .....	.....	2½	15,814.40	.....	.....	32	459	5
6	Iowa .....	.....	2½	^a 19,395.41	.....	All joiner work above protective deck.	36	484	6
7	Kearsarge	{ Forward 3 .. Aft 5	2½	.....	^a 10,806.74	All joiner work...	38	612	7
8	Kentucky	{ Forward 3 .. Aft 5	2½	.....	^a 10,806.74	All joiner work...	38	575	8
9	Louisiana	{ Forward 2½ .. Aft 2½	1	.....	^a 7,860	{ All joiner work above protective deck.	.....	.....	9
10	Maine	{ Forward 3 .. Aft 4	2½	.....	12,625	.....	40	521	10
11	Massachusetts .....	.....	2½	15,814.40	.....	.....	32	477	11
12	Missouri.....	{ Forward 3 .. Aft 4	2½	.....	^a 13,627	{ All joiner work above protective deck.	40	521	12
13	Nebraska.....	3	1½	.....	^a 21,998	All joiner work above protective deck.	44	668	13
14	New Jersey	3	1½	.....	^a 21,998	All joiner work above protective deck.	44	668	14
15	Ohio.....	{ Forward 3 .. Aft 4	2½	.....	^a 13,627	{ Joiner work above protective deck.	40	521	15
16	Oregon .....	.....	2½	15,814.40	.....	.....	32	468	16
17	Rhode Island.....	3	1½	.....	^a 21,998	All joiner work above protective deck.	44	668	17
18	Virginia.....	3	1½	.....	^a 21,998	All joiner work above protective deck.	44	668	18
19	Wisconsin	{ Forward 3 .. Aft 4	2½	.....	11,968	{ Bridges and join- er work.	34	549	19

^a Estimated.

FIRST-CLASS BATTLE SHIPS—Continued.

	Batteries.			Armor.		
	Main.	Secondary.	Torpedo tubes.	Water-line belt.	Tur- rets.	Bar- bettes.
				Inches.	Inches.	Inches.
17	{ 4 12" B. L. R 8 8" B. L. R 12 6" R. F. guns....	{ 12 3" R. F. guns.. 12 3-pdr. R. F..... 8 1-pdr. R. F..... 2 3" R. F. field .. 2 machine guns .. 6 auto. guns..... 12 3" R. F. guns.. 12 3-pdr. R. F..... 8 1-pdr. R. F..... 2 3" R. F. field .. 2 machine guns .. 6 auto. guns.....	None	{ Top 11 Bottom 8	{ 12 8 6	{ 10 7½ 6 4
18	{ 4 12" B. L. R 8 8" B. L. R 12 6" R. F. guns....	{ 12 3" R. F. guns.. 12 3-pdr. R. F..... 8 1-pdr. R. F..... 2 3" R. F. field .. 2 machine guns .. 6 auto. guns..... 16 6-pdr. R. F..... 6 1-pdr. R. F..... 4 Colts..... 2 3" R. F. field ..	None	{ Top 11 Bottom 8	{ 12 8 6	{ 10 7½ 6 4
19	{ 4 13" B. L. R 14 6" R. F. guns....	{ 16 6-pdr. R. F..... 6 1-pdr. R. F..... 4 Colts..... 2 3" R. F. field ..	4 long White- head.	{ Top 16½ Bottom 9½ Water line 13½	14	{ 15 10

FIRST-CLASS BATTLE SHIPS.

	Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of comple- tion.	Date of first commission.	
1	\$2, 650, 000	June 10, 1896	Sept. 24, 1896	Dec. 2, 1896	May 18, 1898	Sept. 24, 1899	Oct. 16, 1900	1
2	.....	July 1, 1902	.....	.....	.....	.....	.....	2
3	3, 590, 000	Mar. 3, 1899	Feb. 18, 1901	Aug. 31, 1901	.....	Feb. 18, 1904	.....	3
4	2, 595, 000	June 10, 1896	Sept. 26, 1896	Feb. 10, 1897	Oct. 4, 1898	Sept. 26, 1899	Sept. 16, 1901	4
5	3, 063, 000	June 30, 1890	Nov. 19, 1890	May 7, 1891	Feb. 28, 1893	Nov. 19, 1893	Nov. 20, 1895	5
6	3, 010, 000	July 19, 1892	Feb. 11, 1893	Aug. 5, 1893	Mar. 28, 1896	Feb. 11, 1896	June 16, 1897	6
7	2, 250, 000	Mar. 2, 1895	Jan. 2, 1896	June 30, 1896	Mar. 24, 1898	Jan. 2, 1899	Feb. 20, 1900	7
8	2, 250, 000	Mar. 2, 1895	Jan. 2, 1896	June 30, 1896	Mar. 24, 1898	Jan. 2, 1899	May 15, 1900	8
9	3, 990, 000	July 1, 1902	Oct. 15, 1902	.....	.....	Mar. 15, 1906	.....	9
10	2, 885, 000	May 4, 1898	Oct. 1, 1898	Feb. 15, 1899	July 27, 1901	June 1, 1901	.....	10
11	3, 063, 000	June 30, 1890	Nov. 18, 1890	June 25, 1891	June 10, 1893	Nov. 18, 1893	June 10, 1896	11
12	2, 885, 000	May 4, 1898	Dec. 30, 1898	Feb. 7, 1900	Dec. 28, 1900	Aug. 30, 1901	.....	12
13	3, 733, 600	Mar. 3, 1899	Mar. 7, 1901	July 4, 1902	.....	Mar. 7, 1904	.....	13
14	3, 405, 000	June 7, 1900	Feb. 15, 1901	Apr. 2, 1902	.....	Feb. 15, 1904	.....	14
15	2, 899, 000	May 4, 1898	Oct. 5, 1898	Apr. 22, 1899	May 18, 1901	June 5, 1901	.....	15
16	3, 222, 810	June 30, 1890	Nov. 19, 1890	Nov. 19, 1891	Oct. 26, 1893	Nov. 19, 1893	July 15, 1896	16
17	3, 405, 000	June 7, 1900	Feb. 15, 1901	May 1, 1902	.....	Feb. 15, 1904	.....	17
18	3, 590, 000	Mar. 3, 1899	Feb. 15, 1901	.....	.....	Feb. 15, 1904	.....	18
19	2, 674, 950	June 10, 1896	Sept. 19, 1896	Feb. 9, 1897	Nov. 26, 1898	Sept. 19, 1899	Feb. 4, 1901	19

ARMORED STEEL VESSELS—

	Name.	Type.	Rtg.	By whom and where built or building.	
1	Texas	Armored battle ship. Two 12" turrets.	Two military masts.	U. S. navy-yard, Norfolk, Va.	1

ARMORED STEEL VESSELS—

	Name.	Speed on trial.	Maximum indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity, at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
		<i>Knots.</i>		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Ft. in.</i>	<i>Knots.</i>	
1	Texas	17.8	8,610	.....	30.22	500	850	25 3	2,900	1

ARMORED STEEL VESSELS—

	Name.	Protective deck.		Water-line protection—obturating material.		Extent of fire-proofed wood.	Complement.		
		Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.		Officers.	Men.	
		<i>Inches.</i>	<i>In.</i>						
1	Texas		2				30	393	1

BUREAU OF CONSTRUCTION AND REPAIR.

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SECOND-CLASS BATTLE SHIP.

	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.	Tonnage.		Type of engines and boilers.	
		Length on load water line.	Extreme breadth.	Mean draft.	Displacement.		Gross.	Net for Suez Canal.		
1	Navy-yard, Norfolk.	<i>Ft. in.</i> 301 4	<i>Ft. in.</i> 64 1	<i>Ft. in.</i> 22 6	<i>Tons.</i> 6,315	6,770	<i>Tons.</i> 4,050.31	<i>Tons.</i>	Twin screw vertical triple-expansion; cylindrical.	1

SECOND-CLASS BATTLE SHIP.

	Batteries.			Armor.			
	Main.	Secondary.	Torpedo tubes.	Water-line belt.	Turrets.	Barbettes.	
				<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	
1	{ 2 12" B. L. R. 6 6" B. L. R.	{ 12 6-pdr. R. F. 6 1-pdr. R. F. 4 87 ^{mm} H. R. C. 2 Colts 1 field gun	Two Whitehead ..	12	12	.....	1

SECOND-CLASS BATTLE SHIP.

	Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commission.	
1	^a \$2,500,000	Aug. 3, 1886	.....	June 1, 1889	June 28, 1892	.....	Aug. 15, 1895	1

^aLimit of cost.

ARMORED STEEL VESSELS—

	Name.	Type.	Rig.	By whom and where built or building.	
1	Brooklyn ^a	Armored cruiser. Four 8" barbette turrets.	Two military masts.	Wm. Cramp & Sons, Philadelphia, Pa.	1
2	California ^a	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Union Iron Works, San Francisco, Cal.	2
3	Colorado ^a	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Wm. Cramp & Sons, Philadelphia, Pa.	3
4	Maryland ^a	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	4
5	New York ^a	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Wm. Cramp & Sons, Philadelphia, Pa.	5
6	Pennsylvania ^a ...	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Wm. Cramp & Sons, Philadelphia, Pa.	6
7	South Dakota ^a ...	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Union Iron Works, San Francisco, Cal.	7
8	Tennessee ^a	Armored cruiser. Two 10" barbette turrets.	Two military masts.	.....	8
9	Washington ^a	Armored cruiser. Two 10" barbette turrets.	Two military masts.	.....	9
10	West Virginia ^a ...	Armored cruiser. Two 8" barbette turrets.	Two military masts.	Newport News S. B. & D. D. Co., Newport News, Va.	10

ARMORED

1	Katahdin,.....	Harbor-defense ram.....	None	Bath Iron Works, Bath, Me..	1
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^a Fitted as a flagship.

ARMORED CRUISERS.

	Condition or service, June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.	Tonnage.		Type of engines and boilers.	
		Length on load water line.	Extreme breadth.	Mean draft.	Displacement.		Gross.	Net for Suez Canal.		
		<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>		
1	North Atlantic Station.	400 6	64 8½	24 0	9,215	9,797	6,204.16	3,267.27	Twin-screw vertical triple expansion; Scotch.	1
2	Building	502 0	69 6½	24 1	13,680	.....	.....	.....	Twin-screw vertical triple expansion; Babcock & Wilcox.	2
3	Building	502 0	69 6½	24 1	13,680	.....	.....	.....	Twin-screw vertical triple expansion; Niclausse.	3
4	Building	502 0	69 6½	24 1	13,680	.....	.....	.....	Twin-screw vertical triple expansion; Babcock & Wilcox.	4
5	Asiatic Station.	380 6½	64 10	23 ¾	8,200	9,021	5,978.71	2,869.42	Twin-screw vertical triple expansion; Scotch.	5
6	Building	502 0	69 6½	24 1	13,680	.....	.....	.....	Twin-screw vertical triple expansion; Niclausse.	6
7	Building	502 0	69 6½	24 1	13,680	.....	.....	.....	Twin-screw vertical triple expansion; Babcock & Wilcox.	7
8	Completing plans.	502 0	72 10½	25 0	14,500	.....	.....	.....	Twin-screw vertical triple expansion; water-tube.	8
9	Completing plans.	502 0	72 10½	25 0	14,500	.....	.....	.....	Twin-screw vertical triple expansion; water-tube.	9
10	Building	502 0	69 6½	24 1	13,680	.....	.....	.....	Twin-screw vertical triple expansion; Babcock & Wilcox.	10

RAM.

1	Navy-yard, League Island.	250 9	43 5	15 0	2,155	2,383	855.87	131.53	Twin-screw horizontal triple expansion; Scotch.	1
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ARMORED STEEL VESSELS—

	Name.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
		<i>Knots.</i>		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Ft. in.</i>	<i>Knots.</i>	
1	Brooklyn	21.91	18,769	8,150	41.19	900	1,622	26 2	5,110	1
2	California.....	<i>a</i> 22	<i>a</i> 23,000	<i>a</i> 13,440	57.8	900	2,000	.....	.....	2
3	Colorado	<i>a</i> 22	<i>a</i> 23,000	.....	57.8	900	2,000	.....	.....	3
4	Maryland.....	<i>a</i> 22	<i>a</i> 23,000	.....	58.2	900	2,000	.....	.....	4
5	New York.....	21	17,401	8,480	39.50	750	1,834	26 8	5,000	5
6	Pennsylvania	<i>a</i> 22	<i>a</i> 23,000	.....	57.8	900	2,000	.....	.....	6
7	South Dakota	<i>a</i> 22	<i>a</i> 23,000	<i>a</i> 13,440	57.8	900	2,000	.....	.....	7
8	Tennessee.....	<i>a</i> 22	<i>a</i> 23,000	<i>a</i> 14,500	<i>a</i> 59.75	<i>a</i> 900	2,000	.....	.....	8
9	Washington.....	<i>a</i> 22	<i>a</i> 23,000	<i>a</i> 14,500	<i>a</i> 59.75	<i>a</i> 900	<i>a</i> 2,000	.....	.....	9
10	West Virginia.....	<i>a</i> 22	<i>a</i> 23,000		58.2	900	2,000			10

ARMORED

1	Katahdin	16.11	5,068	2,125	19.16	175	192.70	16 0	1,000	1
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a Estimated.

ARMORED CRUISERS.

	Batteries.			Armor.			
	Main.	Secondary.	Torpedo tubes.	Water-line belt.	Tur- rets.	Bar- bettes.	
				Inches.	Inches.	Inches.	
1	{ 8 8" B. L. R. 12 5" R. F. guns	{ 12 6-pdr. R. F. 4 1-pdr. R. F. 4 Colts. 2 3" R. F. field. 18 3" R. F. G. 12 3-pdr. R. F.	{ 4 Whitehead	3	5 1/2	8 and 4	1
2	{ 4 8" B. L. R. 14 6" R. F. guns	{ 8 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 18 3" R. F. G. 12 3-pdr. R. F.	{	{ 6 5	{ 6 1/2 6	{ 6	2
3	{ 4 8" B. L. R. 14 6" R. F. guns	{ 8 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 18 3" R. F. G. 12 3-pdr. R. F.	{	{ 6 5	{ 6 1/2 6	{ 6	3
4	{ 4 8" B. L. R. 14 6" R. F. guns	{ 8 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 18 3" R. F. G. 12 3-pdr. R. F.	{	{ 6 5	{ 6 1/2 6	{ 6	4
5	{ 6 8" B. L. R. 12 4" R. F. guns	{ 8 6-pdr. R. F. 2 1-pdr. R. F. 2 Colts. 18 3" R. F. G. 12 3-pdr. R. F.	{ 2 Whitehead	4	5 1/2	10	5
6	{ 4 8" B. L. R. 14 6" R. F. guns	{ 8 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 18 3" R. F. G. 12 3-pdr. R. F.	{	{ 6 5	{ 6 1/2 6	{ 6	6
7	{ 4 8" B. L. R. 14 6" R. F. guns	{ 8 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 22 3" R. F. G. 12 3-pdr. R. F.	{	{ 6 5	{ 6 1/2 6	{ 6	7
8	{ 4 10" B. L. R. 16 6" R. F. guns	{ 4 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 22 3" R. F. G. 12 3-pdr. R. F.	{	{ 5 1/2 3	{ 9 7 5	{ 7 4	8
9	{ 4 10" B. L. R. 16 6" R. F. guns	{ 4 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns. 18 3" R. F. G. 12 3-pdr. R. F.	{	{ 5 1/2 3	{ 9 7 5	{ 7 4	9
10	{ 4 8" B. L. R. 14 6" R. F. guns	{ 8 1-pdr. R. F. 2 3" R. F. field. 2 machine guns .. 6 automatic guns.	{	{ 6 5	{ 6 1/2 6	{ 6	10

RAM.

1	4 6-pdr. R. F.		{ 6 3		1
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ARMORED STEEL VESSELS—

	Name.	Protective deck.		Water-line protection— obturator material.		Extent of fire- proofed wood.	Comple- ment.		
		Slopes.	Flat.	Cocoa, ca- pacity in cubic feet.	Corn pith, capacity in cubic feet.		Offi- cers.	Men.	
		<i>Inches.</i>	<i>In.</i>						
1	Brooklyn.....	6	3	24,789.33	.....	About half of joiner work above protect- ive deck.	46	513	1
2	California.....	4	1½	.....	a 22,400	Joiner work above protect- ive deck.	47	698	2
3	Colorado.....	4	1½	.....	a 22,400	do.....	47	698	3
4	Maryland.....	4	1½	.....	a 22,400	do.....	47	698	4
5	New York.....	6	3	25,386.66	.....	do.....	40	525	5
6	Pennsylvania.....	4	1½	.....	a 22,400	do.....	47	698	6
7	South Dakota.....	4	1½	.....	a 22,400	do.....	47	698	7
8	Tennessee.....	b 4 c 3	1½	.....	.....	do.....	.....	.....	8
9	Washington.....	b 4 c 3	1½			do.....			9
10	West Virginia.....	4	1½		a 22,400	do.....	47	698	10

ARMORED

1	Katahdin.....	6	2				7	90	1
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a Estimated.

b Inside citadel.

c Outside of armored citadel.

BUREAU OF CONSTRUCTION AND REPAIR.

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ARMORED CRUISERS—Continued.

	Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commission.	
1	\$2,986,000	July 19, 1892	Feb. 11, 1893	Aug. 2, 1893	Oct. 2, 1895	Feb. 11, 1896	Dec. 1, 1896	1
2	3,800,000	Mar. 3, 1899	Jan. 10, 1901	May 2, 1902	.....	Jan. 10, 1904	.....	2
3	3,780,000	June 7, 1900	Jan. 10, 1901	Apr. 25, 1901	.....	Jan. 10, 1904	.....	3
4	3,775,000	June 7, 1900	Jan. 24, 1901	Oct. 29, 1901	.....	Jan. 24, 1904	.....	4
5	2,985,000	Sept. 7, 1888	Aug. 28, 1890	Sept. 30, 1890	Dec. 2, 1891	Jan. 1, 1893	Aug. 1, 1893	5
6	3,890,000	Mar. 3, 1899	Jan. 10, 1901	Aug. 7, 1901	.....	Jan. 10, 1904	.....	6
7	3,750,000	June 7, 1900	Jan. 10, 1901	.....	.....	Jan. 10, 1904	.....	7
8	.....	July 1, 1902	.....	.....	.....	.....	.....	8
9	.....	July 1, 1902	.....	.....	.....	.....	.....	9
10	3,885,000	Mar. 3, 1899	Jan. 24, 1901	Sept. 16, 1901	.....	Jan. 24, 1904	.....	10

RAM.

1	\$930,000	Mar. 2, 1889	Jan. 28, 1891	July, 1891	Feb. 4, 1893	July 28, 1892	Feb. 20, 1896	1
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REPORT OF THE SECRETARY OF THE NAVY.

ARMORED STEEL VESSELS—SINGLE.

	Name.	By whom and where built or building.	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.	Tonnage.	
				Length on load water line.	Extreme breadth.	Mean draft.	Displacement.		Gross.	Net for Suez Canal.
				<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1	Arkansas.	Newport News S. B. & D. D. Co., Newport News, Va.	Building	252 0	50 0	12 6	3,235	^a 3,466	1,613.27	 1
2	Florida...	Crescent Shipyard, Elizabethport, N. J.	Building	252 0	50 0	12 6	3,225	^a 3,466	1,613.27	 2
3	Nevada...	Bath Iron Works, Bath, Me.	Building	252 0	50 0	12 6	3,228	^a 3,466	1,613.27	 3
4	Wyoming.	Union Iron Works, San Francisco, Cal.	Building	252 0	50 0	12 6	3,218	^a 3,466	1,613.27	 4

Name.	Batteries.		Armor.			Protective deck.		Water-line protection—obturate material.		Extent of fire-proofed wood.
	Main.	Secondary.	Sides.	Turrets.	Barbettes.	Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.	
1	Arkansas.	{ 2 12" B. L. R. 4 4" R. F. ...	{ 36-pdr. R. F. 61-pdr. R. F. 2 Colts.	{ 5 11	{ 9 10	{ 9 11	{ ... 14	None	None	{ Decks and joiner work, above protective deck.
2	Florida...	{ 2 12" B. L. R. 4 4" R. F. ...	{ 36-pdr. R. F. 61-pdr. R. F. 2 Colts.	{ 11 11	{ 10 10	{ 11 11	{ ... 14	None	None	{ Joiner work, above main deck.
3	Nevada...	{ 2 12" B. L. R. 4 4" R. F. ...	{ 36-pdr. R. F. 36-pdr. R. F. 61-pdr. R. F. 2 Colts.	{ 11 11	{ 10 10	{ 11 11	{ ... 14	None	None	{ Decks and joiner work.
4	Wyoming.	{ 2 12" B. L. R. 4 4" R. F. ...	{ 36-pdr. R. F. 61-pdr. R. F. 2 Colts.	{ 11 11	{ 10 10	{ 11 11	{ ... 14	None	None	{ Decks and joiner work.

^a Estimated.

TURRET HARBOR-DEFENSE MONITORS.

Type of engines and boilers.		Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.
		<i>Knots.</i>		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Fl. in.</i>	<i>Knots.</i>
1	Twin screw vertical triple expansion; Thornycroft.	a 11½	a 2,400	.....	25.39	400	400	a 12 10½	 1
2	Twin screw vertical triple expansion; modified Normand.	a 11½	a 2,400	.....	25.38	400	400	a 12 10½	 2
3	Twin screw vertical triple expansion; Niclausse.	a 11½	a 2,400	.....	25.39	361	361	a 12 10½	 3
4	Twin screw vertical triple expansion; Babcock & Wilcox.	a 11½	a 2,400	.....	25.4	400	400	a 12 10½	 4

	Complement.		Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commission.
	Officers.	Men.							
1	13	135	\$960,000	May 4, 1898	Oct. 11, 1898	Nov. 14, 1899	Nov. 10, 1900	Mar. 11, 1901	 1
2	13	135	925,000	May 4, 1898	Oct. 11, 1898	Jan. 23, 1899	Nov. 30, 1901	Mar. 11, 1901	 2
3	13	135	962,000	May 4, 1898	Oct. 19, 1898	Apr. 17, 1899	Nov. 24, 1900	Mar. 19, 1901	 3
4	13	135	975,000	May 4, 1898	Oct. 5, 1898	Apr. 11, 1899	Sept. 8, 1900	Mar. 5, 1901	 4

a Estimated.

REPORT OF THE SECRETARY OF THE NAVY.

ARMORED VESSELS—DOUBLE—

	Name.	Type.	Rig.	By whom and where built or building.	
1	Amphitrite.....	Iron low-freeboard coast-defense monitor. Two steel barbette turrets.	One military mast.	Harlan & Hollingsworth, Wilmington, Del., and navy-yard, Norfolk.	1
2	Miantonomoh ..	Iron low-freeboard coast-defense monitor. Two compound armor turrets.	One military mast.	John Roach, Chester, Pa., and navy-yard, New York.	2
3	Monadnock	Iron low-freeboard coast-defense monitor. Two steel barbette turrets.	One military mast.	Continental Iron Works, Vallejo, Cal., and navy-yard, Mare Island.	3
4	Monterey.....	Steel low-freeboard monitor. Two steel barbette turrets.	One military mast.	Union Iron Works, San Francisco, Cal.	4
5	Puritan	Iron low-freeboard coast-defense monitor. Two steel barbette turrets.	One military mast.	John Roach, Chester, Pa., and navy-yard, New York.	5
6	Terror.....	Iron low-freeboard coast-defense monitor. Two steel turrets.	One military mast.	Wm. Cramp & Sons, Philadelphia, Pa., and navy-yard, New York.	6

	Name.	Speed per hour on trial.	Indicated horse-power on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft a ft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
		<i>Knots.</i>		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Ft. in.</i>	<i>Knots.</i>	
1	Amphitrite	10.5	1,600	.....	27.67	250	250	14 7½	1,300	1
2	Miantonomoh ..	10.5	1,426	.....	27.67	250	260	15 0	1,200	2
3	Monadnock.....	12	3,000	.....	27.67	250	386	14 7½	2,969	3
4	Monterey	13.6	5,244	4,000	26.74	200	233	15 4	1,430	4
5	Puritan	12.4	3,700	.....	33.64	307	314	18 6	.....	5
6	Terror	10.5	1,600	.....	27.67	250	285	15 4	1,300	6

TURRET MONITORS.

	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full-load displacement.	Tonnage.		Type of engines and boilers.
		Length on load water line.	Extreme breadth.	Mean draft.	Displacement.		Gross.	Net for Suez Canal.	
		<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	
1	Repairing, Navy- yard, Boston.	259 6	55 6	14 6	3,990	.....	1,536.15	.....	Twin screw in- clined com- pound; Bab- cock & Wilcox.
2	League Island	259 6	55 6	14 6	3,990	.....	1,330.65	.....	Twin screw in- clined com- pound; Scotch.
3	Asiatic Station	259 6	55 6	14 7	4,005	.....	1,618.26	988.31	Twin screw hori- zontal triple ex- pansion; Scotch.
4	Asiatic Station	256 0	59 0	14 10	4,084	.....	1,589.74	839.54	Twin screw verti- cal triple expan- sion; Ward and Scotch.
5	Special Service	290 3	60 1½	18 0	6,060	.....	2,144.18	.....	Twin screw hori- zontal com- pound; Scotch.
6	Naval Academy, Annapolis, Md.	259 6	55 6	14 6	3,990	.....	1,515.65	.....	Twin screw in- clined com- pound; Scotch.

Batteries.				Armor.		
Main.	Secondary.	Tor- pedo tubes.	Sides.	Turrets.	Barbettes.	
			<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>	
1 {4 10" B. L. R	{2 6-pdr. R. F. G.....	}	{ 9 5 }	7½	11½	1
{2 4" R. F. guns	{2 3-pdr. R. F. G.....					
	{2 37mm H. R. C.....					
	{7 1-pdr. R. F. G.....					
	{1 Colt.....	}	7	11½		2
2 4 10" B. L. R	{2 6-pdr. R. F. G.....					
	{2 3-pdr. R. F. G.....					
	{6 1-pdr. R. F. G.....					
	{1 Colt.....	}	{ 9 5 }	7½	11½	3
3 {4 10" B. L. R	{2 6-pdr. R. F. G.....					
{2 4" R. F. guns	{2 3-pdr. R. F. G.....					
	{2 37mm H. R. C.....					
	{2 1-pdr. R. F. G.....	}	{ 13 8 6 }	{ Forward 8..... Aft 7½	{ Forward 18..... Aft 11½	4
4 {2 12" B. L. R	{4 1-pdr. R. F. G.....					
{2 10" B. L. R	{2 Gatling					
	{1 field gun.....					
	{6 6-pdr. R. F. G.....	}	{ 14 10 6 }	8	14	5
5 {4 12" B. L. R	{6 6-pdr. R. F. G.....					
{6 4" R. F. guns	{2 37mm H. R. C.....					
	{2 1-pdr. R. F. G.....					
	{2 6-pdr. R. F. G.....	}	{ 7 4 }	11½		6
6 4 10" B. L. R	{2 3-pdr. R. F. G.....					
	{2 37mm H. R. C.....					

ARMORED VESSELS—DOUBLE—

	Name.	Protective deck.		Extent of fireproofed wood.	Complement.		
		Slopes.	Flat.		Officers.	Men.	
		Inches.	Inches.				
1	Amphitrite .....	.....	14	.....	19	172	1
2	Miantonomoh .....	.....	14	Decks and joiner work.....	13	150	2
3	Monadnock .....	.....	14	.....	26	202	3
4	Monterey.....	.....	3	.....	19	199	4
5	Puritan.....	.....	2	.....	22	248	5
6	Terror.....	.....	14	.....	26	30	6

ARMORED IRON VESSELS—

	Name.	Keel laid.	By whom and where built.	Condition or service June 30, 1902.	Dimensions.			Displacement.	Indicated horse-power.	
					Length between perpendiculars.	Breadth.	Mean draft.			
					Feet.	Ft. in.	Ft. in.			
1	Canonicus ..	1862	Harrison Loring, Boston, Mass.	Navy-yard, League Island.	225	48 8	13 6	2,100	340	1
2	Jason	1862	John Ericsson, Chester, Pa.	Navy-yard, League Island.	200	46 0	11 6	1,875	340	2
3	Lehigh	1862	John Ericsson, Chester, Pa.	Navy-yard, League Island.	200	46 0	11 6	1,875	340	3
4	Montauk ..	1862	John Ericsson, Brooklyn, N. Y.	Navy-yard, League Island.	200	46 0	11 6	1,875	340	4
5	Nahant.....	1862	Harrison Loring, Boston, Mass.	Navy-yard, League Island.	200	46 0	11 6	1,875	340	5

TURRET MONITORS—Continued.

	Contract price of hull and machinery.	Date of act authorizing the completion.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commission.	
1	(a)	Mar. 3, 1885 Aug. 3, 1886 Mar. 3, 1887	.....	1874	June 7, 1883	.....	Apr. 23, 1896	1
2	(a)	Mar. 3, 1885 Aug. 3, 1886 Mar. 3, 1887	.....	1874	Dec. 5, 1876	.....	Oct. 27, 1891	2
3	(a)	Mar. 3, 1885 Aug. 3, 1886 Mar. 3, 1887	.....	1875	Sept. 19, 1883	.....	Feb. 20, 1896	3
4	\$1,628,950	Mar. 3, 1887	June 14, 1889	Dec. 20, 1889	Apr. 28, 1891	June 14, 1892	Feb. 13, 1893	4
5	(a)	Mar. 3, 1885 Aug. 3, 1886 Mar. 3, 1887	.....	1875	Dec. 6, 1882	.....	Dec. 10, 1896	5
6	(a)	Mar. 3, 1885 Aug. 3, 1886 Mar. 3, 1887	.....	1874	Mar. 24, 1883	.....	Apr. 15, 1896	6

^a Appropriation to complete Amphitrite, Miantonomoh, Monadnock, Puritan, and Terror, \$3,178,046.

SINGLE-TURRET MONITORS.

	Type of engines and boilers.	Speed in knots.	Batteries.		Armor.		Cost of hull and machinery.	Date of act authorizing the building.	
			Main.	Secondary.	Sides.	Turret.			
1	Single-screw grasshopper; Babcock & Wilcox.	6	2 XV"S. B...	2 12-pdr. H..	In. 5	In. 10	\$622,963.22	Apr. 17, 1862	1
2	Single-screw grasshopper; rectangular.	5 to 6	2 XV"S. B...	2 12-pdr. H..	5	11	422,766.73	Apr. 17, 1862	2
3	Single-screw grasshopper; rectangular.	5 to 6	2 XV"S. B...	2 12-pdr. H..	5	11	422,726.28	Apr. 17, 1862	3
4	Single-screw grasshopper; rectangular.	5 to 6	2 XV"S. B...	2 12-pdr. H..	5	11	423,027.49	Apr. 17, 1862	4
5	Single-screw grasshopper; rectangular.	5 to 6	2 XV"S. B...	2 12-pdr. H..	5	11	413,515.14	Apr. 17, 1862	5

UNARMORED STEEL VESSELS—

Name.	Rig.	By whom and where built or building.	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.
				Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	
				<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>
1 Albany <i>st.</i>	Two military masts.	Sir W. G. Armstrong, Mitchell & Co., Elswick yard, Newcastle-on-Tyne, England. ^a	European Station.	346 0	43 9	18 0	3,769	4,011 1
2 Atlanta...	Two pole masts.	John Roach & Sons, Chester, Pa.	South Atlantic Station.	271 3	42 1½	16 10	3,000	3,180 2
3 Baltimore	Two pole masts.	Wm. Cramp & Sons, Philadelphia, Pa.	New York Navy-Yard.	327 6	48 7½	20 0	4,413	5,486 3
4 Boston....	Two-masted schooner.	John Roach & Sons, Chester, Pa.	Repairing, Mare Island, Cal.	271 3	42 1½	17 0	3,085	3,195 4
5 Charleston.	Two military masts.	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	Building	424 0	66 0	22 6	9,700	 5
6 Chattanooga <i>sg.</i>	Two-masted schooner.	Crescent Ship Yard, Elizabethport, N. J.	Building	292 0	44 0	15 9	63,200	63,500 6
7 Chicago ..	Two-masted schooner.	John Roach & Sons, Chester, Pa.	European Station.	325 0	48 2	20 4½	5,000	5,273 7
8 Cincinnati.	One pole mast.	U. S. navy-yard, Brooklyn, N. Y.	Training ship ...	300 0	42 0	18 0	3,213	3,562 8
9 Cleveland <i>sg.</i>	Two-masted schooner.	Bath Iron Works, Bath, Me.	Building	292 0	44 0	15 9½	63,200	63,500 9
10 Columbia.	Schooner ...	Wm. Cramp & Sons, Philadelphia, Pa.	Receiving ship, New York Navy-yard.	412 0	58 2½	22 6	7,375	8,442 10
11 Denver <i>sg.</i>	Two-masted schooner.	Neafie & Levy, Philadelphia, Pa.	Building	292 0	44 0	15 9	63,200	63,500 11
12 Des Moines <i>sg.</i>	Two-masted schooner.	Fore River Ship and Engine Co., Quincy, Mass.	Building	292 0	44 0½	15 9	63,200	63,500 12
13 Galveston <i>sg.</i>	Two-masted schooner.	W. R. Trigg Co., Richmond, Va.	Building	292 0	44 0	15 9	63,200	63,500 13
14 Milwaukee.	Two military masts.	Union Iron Works, San Francisco, Cal.	Building	424 0	66 0	22 6	9,700	 14
15 Minneapolis.	Schooner ...	Wm. Cramp & Sons, Philadelphia, Pa.	Receiving ship, League Island.	412 0	58 2½	22 6	7,375	8,878 15
16 Newark ..	Two-masted schooner.	Wm. Cramp & Sons, Philadelphia, Pa.	Repairing, Boston Navy-Yard.	311 7	49 2	18 9	4,098	4,592 16

^a Engines and boilers built by R. & W. Hawthorn, Leslie & Co., Limited, St. Peter's Works, Newcastle-on-Tyne, England.

^b With two-third stores.

^c Estimated.

(*st.*) Sheathed with teak below water line.

(*sg.*) Sheathed with Georgia pine below water line.

BUREAU OF CONSTRUCTION AND REPAIR.

PROTECTED CRUISERS.

	Tonnage.		Type of engines and boilers.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
	Gross.	Net for Suez Canal.										
	Tons.	Tons.		Knots.		Tons.		Tons.	Tons.	Ft. in.	Knots.	
1	2,180.34	1,121.38	Twin screw vertical triple expansion; cylindrical.	20.5	7,400	3,450	23.27	512	747	20 0	.....	1
2	2,028.18	.....	Single screw horizontal compound; Scotch, Babcock & Wilcox.	15.60	4,030	3,070	20.03	382	573	20 0	.....	2
3	3,019.18	.....	Twin screw horizontal triple expansion; Scotch.	20.096	10,064	4,535	26.02	734	1,101	23 11	7,212	3
4	2,028.18	.....	Single screw horizontal compound; Scotch.	15.60	4,300	3,025	20.03	380	456	.....	3,300	4
5	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	c22	c21,000	9,700	44.60	.....	.....	.....	.....	5
6	2,459	.....	Twin screw vertical triple expansion; water tube.	c16.5	c4,700	.....	22.3	467	700	.....	.....	6
7	3,152.54	.....	Twin screw slightly inclined triple expansion; Scotch, Babcock & Wilcox.	c18	c9,000	4,546	27.3	593	890	23 1	.....	7
8	2,003.81	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	c19	c10,000	3,213	20.04	384	577	20 2	3,000	8
9	.....	.....	Twin screw vertical triple expansion; water tube; Babcock & Wilcox.	c16.5	c4,700	.....	22.3	467	700	.....	.....	9
10	5,552.48	.....	Triple screw vertical triple expansion; Scotch.	22.8	18,509	7,350	36.87	750	1,670	25 7	7,200	10
11	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	c16.5	c4,700	.....	22.3	467	700	.....	.....	11
12	.....	.....	Twin screw vertical triple expansion; water tube.	c16.5	c4,700	.....	22.3	467	697	.....	.....	12
13	.....	.....	Twin screw vertical triple expansion; water tube.	c16.5	c4,700	.....	22.3	467	700	.....	.....	13
14	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	c22	c21,000	9,700	.....	.....	.....	.....	.....	14
15	5,552.48	.....	Triple screw vertical triple expansion; Scotch.	23.073	20,862	7,375	36.87	750	1,844	25 7	6,300	15
16	2,776.76	1,397.83	Twin screw horizontal triple expansion; Scotch.	19	8,860	3,895	25	400	868	23 3	5,656	16

c Estimated.

UNARMORED STEEL VESSELS—

Name.	Rig.	By whom and where built or building.	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.
				Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	
				<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>
17 New Orleans <i>et.</i>	Two military masts.	Sir W. G. Armstrong, Mitchell & Co., Elswick yard, Newcastle-on-Tyne, England. ^a	Asiatic Station ..	346 0	43 9	18 0	3,769	4,001 17
18 Olympia..	Schooner...	Union Iron Works, San Francisco, Cal.	North Atlantic Station.	340 0	58 0½	21 6	5,870	6,602 18
19 Philadelphia.	Schooner...	Wm. Cramp & Sons, Philadelphia, Pa.	Pacific Station...	327 6	48 7½	19 6	4,410	5,305 19
20 Raleigh ..	Two-masted schooner.	U. S. navy-yard, Norfolk, Va.	Repairing navy-yard, Portsmouth, N. H.	300 0	42 0	18 0	3,213	3,462 20
21 San Francisco.	Two military masts.	Union Iron Works, San Francisco, Cal.	European Station.	310 0	49 3¼	21 7½	4,868	5,169 21
22 St. Louis..	Two military masts.	Neafie & Levy, Philadelphia, Pa.	Building	424 0	6 60	22 6	9,700	 22
23 Tacoma <i>et.</i>	Two-masted schooner.	Union Iron Works, San Francisco, Cal.	Building	292 0	44 1½	15 0	3,200	3,500 23

^a Engines and boilers built by Humphreys & Tennant, Limited, London.^b Estimated.^c With two-thirds stores.

BUREAU OF CONSTRUCTION AND REPAIR.

PROTECTED CRUISERS—Continued.

	Tonnage.		Type of engines and boilers.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.
	Gross.	Net for Suez Canal.									
	Tons.	Tons.		Knots.		Tons.		Tons.	Tons.	Ft. in.	Knots.
17	2,180.34	1,121.38	Twin screw vertical triple expansion; cylindrical.	^b 20	^b 7,500	.....	23.27	512	767	19 9	 17
18	4,011.89	.....	Twin screw vertical triple expansion; Scotch.	21.686	17,313	5,566	29.36	400	1,169.66	24 9½	6,105 18
19	3,048.54	.....	Twin screw horizontal triple expansion; Scotch.	19.678	8,815	4,325	25.89	400	1,074	24 0	6,354 19
20	2,003.81	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	^b 19	^b 10,000	3,574	20.04	350	600	20 2½	2,940 20
21	2,813.93	1,266.27	Twin screw horizontal triple expansion; Scotch.	19.525	9,913	4,040	25	350	627.76	22 8	4,000 21
22	.....	.....	Twin screw vertical triple expansion; Babcock & Wilcox.	^b 22	^b 21,000	.....	.....	.....	.....	.....	..... 22
23	.....	.....	Twin screw vertical triple expansion; water tube; Babcock & Wilcox.	^b 16.5	^b 4,700	.....	22.3	467	700	.....	..... 23

^b Estimated.

UNARMORED STEAM VESSELS—

Name.	Batteries.			Protective deck.		Water-line protection—obturating material.		Extent of fireproofed wood.
	Main.	Secondary.	Torpedo tubes.	Slopes.	Flat.	Cocos, capacity in cubic feet.	Corn pith, capacity in cubic feet.	
1 Albany.....	{ 6 6" R. F. G..... 4 4.7" R. F. G.....	{ 10 6-pdr. R. F..... 8 1-pdr. R. F..... 2 Colts..... 2 6-pdr. R. F..... 4 1-pdr. R. F..... 2 Colts..... 1 3" R. F. field.....		In. 3	In. 14			1
2 Atlanta.....	{ 2 8" B. L. R..... 6 6" R. F. guns.....	{ 6 3-pdr. R. F..... 4 1-pdr. R. F..... 4 auto. guns..... 1 3" R. F. field..... 6 6-pdr. R. F..... 4 1-pdr. R. F..... 2 1-pdr. auto..... 1 3" field gun.....		14	14			{ Joiner work in part. } 2
3 Baltimore ^a	{ 12 6" R. F..... 6 14-pdr. R. F.....	{ 6 3-pdr. R. F..... 4 1-pdr. R. F..... 4 auto. guns..... 1 3" R. F. field.....		4	24			3
4 Boston.....	{ 2 8" B. L. R..... 6 6" B. L. R.....	{ 6 6-pdr. R. F..... 4 1-pdr. R. F..... 2 1-pdr. auto..... 1 3" field gun..... 18 3" R. F..... 12 3-pdr. S. A..... 4 1-pdr. auto..... 8 1-pdr. R. F..... 2 3" R. F. field..... 2 .30 cal. mach..... 8 .30 cal. auto.....		14	14			{ Joiner work. } 4
5 Charleston ^b	14 6" R. F.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....		3	2			{ Joiner work above protective deck. } 5
6 Chattanooga.....	10 5" R. F. G.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....		{ 2 and 1 }	4	6,720		{ Joiner work above protective deck. } 6
7 Chicago ^a	{ 4 8" B. L. R..... 11 5" R. F. guns.....	{ 9 6-pdr. R. F..... 2 1-pdr. R. F..... 2 Colts..... 1 3" R. F. field..... 8 6-pdr. R. F..... 2 1-pdr. R. F..... 2 Colts..... 1 3" R. F. field.....		14	14			{ Decks and all joiner work. } 7
8 Cincinnati.....	11 5" R. F. guns.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 2 Colts..... 1 3" R. F. field.....		24	1	6,970		8
9 Cleveland.....	10 5" R. F. G.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....		{ 2 and 1 }	4	6,720		{ Joiner work. } 9
10 Columbia.....	{ 1 8" B. L. R..... 2 6" B. L. R..... 8 4" R. F. guns.....	{ 12 6-pdr. R. F..... 2 1-pdr. R. F..... 2 Colts..... 1 3" R. F. field..... 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....	4 White-head.	4	24	9,829		10
11 Denver.....	10 5" R. F. G.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....		{ 2 and 1 }	4	6,320		{ Decks and joiner work. } 11
12 Des Moines.....	10 5" R. F. G.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....		{ 2 and 1 }	4	6,720		{ Decks and joiner work above protective deck. } 12
13 Galveston.....	10 5" R. F. G.....	{ 8 6-pdr. R. F..... 2 1-pdr. R. F..... 4 Colt aut..... 1 3" field.....		{ 2 and 1 }	4	6,720		{ Joiner work above protective deck. } 13
14 Milwaukee ^b	14 6" R. F. guns.....	{ 18 3" R. F..... 12 3-pdr. S. A..... 4 1-pdr. auto..... 8 1-pdr. R. F..... 2 3" R. F. field..... 2 .30 cal. mach..... 8 .30 cal. auto.....		3	2			{ Joiner work above protective deck. } 14
15 Minneapolis ^a	{ 1 8" B. L. R..... 2 6" B. L. R..... 8 4" R. F. guns.....	{ 12 6-pdr. R. F..... 2 1-pdr. R. F..... 2 Colts..... 1 3" R. F. field.....	4 White-head.	4	24	9,829		15

^a Flagship.^b Thickness of belt armor, 4 inches.^c Estimated.

BUREAU OF CONSTRUCTION AND REPAIR.

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PROTECTED CRUISERS—Continued.

	Comple- ment.		Contract price of hull and machin- ery.	Date of act authoriz- ing the building.	Contract signed.	Keel laid.	Launched.	Contract date of com- pletion.	Date of first commis- sion.	
	Offi- cers.	Men								
1	24	332	.....	.....	.....	.....	Jan. 14, 1899	(a)	May 29, 1900	1
2	19	285	\$617,000	Mar. 3, 1883	July 23, 1883	Nov. 8, 1883	Oct. 9, 1884	Jan. 23, 1885	July 19, 1886	2
3	36	353	1,325,000	Aug. 3, 1886	Dec. 17, 1886	May 5, 1887	Oct. 6, 1888	June 17, 1888	Jan. 7, 1890	3
4	22	259	619,000	Mar. 3, 1883	July 23, 1883	Nov. 15, 1883	Dec. 4, 1884	Jan. 23, 1885	May 2, 1887	4
5	.....	631	2,740,000	June 7, 1900	Mar. 30, 1901	Jan. 30, 1902	.....	Mar. 30, 1904	.....	5
6	21	281	1,039,966	Mar. 3, 1899	Dec. 14, 1899	Mar. 29, 1900	.....	June 14, 1902	.....	6
7	33	438	889,000	Mar. 3, 1883	July 26, 1883	Dec. 29, 1883	Dec. 5, 1885	Jan. 26, 1886	Apr. 17, 1889	7
8	20	341	^b 1,100,000	Sept. 7, 1888	.....	Jan., 1890	Nov. 10, 1892	.....	June 16, 1894	8
9	30	281	1,041,650	Mar. 3, 1899	Dec. 14, 1899	June 1, 1900	Sept. 28, 1901	June 14, 1902	.....	9
10	30	447	2,725,000	June 30, 1890	Nov. 19, 1890	Dec. 30, 1890	July 26, 1892	May 19, 1893	Apr. 23, 1894	10
11	30	281	1,080,000	Mar. 3, 1899	Dec. 14, 1899	June 28, 1900	June 21, 1902	June 14, 1902	.....	11
12	27	281	1,065,000	Mar. 3, 1899	Dec. 14, 1899	Aug. 28, 1900	.....	June 14, 1902	.....	12
13	30	281	1,027,000	Mar. 3, 1899	Dec. 14, 1899	Jan. 13, 1901	.....	June 14, 1902	.....	13
14	.....	631	2,825,000	June 7, 1900	Apr. 17, 1901	.....	.....	Apr. 17, '04	.....	14
15	30	118	2,690,000	Mar. 2, 1891	Aug. 31, 1891	Dec. 16, 1891	Aug. 12, 1893	Aug. 31, 1893	Dec. 13, 1894	15

^a Date of purchase, March 16, 1898.^b Limit of cost.

UNARMORED STEEL VESSELS—

Name.	Batteries.			Protective deck.		Water-line protection—obturating material.		Extent of fireproofed wood.
	Main.	Secondary.	Torpedo tubes.	Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.	
16 Newark ^b	12 6" R. F. guns.	{ 8 6-pdr. R. F.... 4 1-pdr. R. F.... 2 Colts..... }		In.	In.			16
17 New Orleans.	{ 6 6" R. F. G.... 4 4.7" R. F. G.... }	{ 10 6-pdr. R. F.... 8 1-pdr. R. F.... 2 Colts..... }		3	2			17
18 Olympia ^b	{ 10 5" R. F. guns. 4 8" B. L. R. mounted in barbette turrets, armor 3½ and 4½ inches. }	{ 14 6-pdr. R. F.... 7 1-pdr. R. F.... 1 Gatling..... }		4½	2	11,333		18
19 { Philadelphia. ^b	{ 12 6" R. F. guns.	{ 4 6-pdr. R. F.... 4 3-pdr. R. F.... 5 1-pdr. R. F.... 4 Colts..... 1 3" R. F. field.. }		4	2½			19
20 Raleigh	11 5" R. F. guns.	{ 8 6-pdr. R. F.... 4 1-pdr. R. F.... 2 Colts..... }		2½	1	6,970		20
21 { San Francisco. ^b	{ 12 6" R. F..... }	{ 10 6-pdr. R. F.... 4 1-pdr. R. F.... 2 Colts..... }		3	2			{ Poopdeck plank, and joiner work above protective deck. }
22 St. Louis ^a ...	14 6" R. F.....	{ 18 3" R. F..... 12 3-pdr. S. A.... 4 1-pdr. auto.... 8 1-pdr. R. F.... 2 3" R. F. field.. 2 .30 cal. mach.. 8 .30 cal. auto.... }		3	2			{ Joiner work above protective deck. }
23 Tacoma	10 5" R. F. G....	{ 8 6-pdr. R. F.... 2 1-pdr. R. F.... 4 Colt aut., 1 3" field. }		{ 2 and 1 }	½	6,720		{ Joiner work above protective deck. }

^a Thickness of belt armor 4 inches.^b Flagship.^c Estimated.

BUREAU OF CONSTRUCTION AND REPAIR.

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PROTECTED CRUISERS—Continued.

	Comple- ment.		Contract price of hull and machin- ery.	Date of act authoriz- ing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commis- sion.	
	Off- cers.	Men.								
16	34	400	\$1,248,000	Mar. 3, 1885	Oct. 27, 1887	June 12, 1888	Mar. 19, 1890	Oct. 27, 1889	Feb. 2, 1891	16
17	24	342	.....	.....	.....	.....	Dec. 4, 1896	(a)	Mar. 18, 1898	17
18	32	417	1,796,000	Sept. 7, 1888	July 10, 1890	June 17, 1891	Nov. 5, 1892	Apr. 1, 1893	Feb. 5, 1895	18
19	34	359	1,850,000	Mar. 3, 1887	Oct. 27, 1887	Mar. 22, 1888	Sept. 7, 1889	Oct. 27, 1889	July 28, 1890	19
20	20	297	^b 1,100,000	Sept. 7, 1888	.....	Dec., 1889	Mar. 31, 1892	.....	Apr. 17, 1894	20
21	24	319	1,428,000	Mar. 3, 1887	Oct. 26, 1887	Aug. 14, 1888	Oct. 26, 1889	Oct. 26, 1889	Nov. 15, 1890	21
22	.....	631	2,740,000	June 7, 1900	Mar. 11, 1901	.....	.....	Mar. 11, 1904	.....	22
23	30	281	1,041,900	Mar. 3, 1899	Dec. 14, 1899	Sept. 27, 1900	.....	^c June 14, '02	.....	23

^aDate of purchase, March 16, 1898.^bLimit of cost.^cTime extended to May 1, 1903.

UNARMORED STEEL VESSELS—UNPRO

	Name.	Rig.	By whom and where built or building.	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full-load displacement.	
					Length on load water line.	Extreme breadth.	Mean draft.	Displacement.		
1	Detroit	Two-masted schooner.	Columbian Iron Works, Baltimore, Md.	Repairing, navy-yard, Portsmouth, N. H.	<i>Ft. in.</i> 257 0	<i>Ft. in.</i> 37 0	<i>Ft. in.</i> 14 7	<i>Tons.</i> 2,089	<i>Tons.</i> 2,235	1
2	Marblehead	Two-masted schooner.	City Point Works, Boston, Mass.	Navy-yard, Mare Island.	257 0	37 0	14 7	2,089	2,219	2
3	Montgomery.	Two-masted schooner.	Columbian Iron Works, Baltimore, Md.	Navy-yard, New York.	257 0	37 0	14 7	2,089	2,235	3

	Name.	Batteries.			Water-tight deck.		Water-line protection—obturating material.		Extent of fire-proofed wood.	
		Main.	Secondary.	Torpedo tubes.	Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.		
1	Detroit	10 5" R. F. guns.	{ 6 6-pdr. R. F. .. 2 1-pdr. R. F. .. 2 Colts. 1 3" R. F. field. }	None ..	<i>Inch.</i> $\frac{7}{8}$	<i>Inch.</i> $\frac{7}{8}$	878	.....	.....	1
2	Marblehead	10 5" R. F. guns.	{ 6 6-pdr. R. F. .. 2 1-pdr. R. F. .. 1 3" field gun... 2 Colts. .... }	.....	$\frac{7}{8}$	$\frac{7}{8}$	878	.....	{ Joiner work in part. }	2
3	{Montgomery.	{10 5" R. F. guns.	{ 6 6-pdr. R. F. .. 2 1-pdr. R. F. .. 2 Colts. .... }	.....	$\frac{7}{8}$	$\frac{7}{8}$	878	.....	.....	3

TECTED CRUISERS—Continued.

Tonnage.		Type of engines and boilers.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.
Gross.	Net for Suez Canal.									
Tons.	Tons.		Knots.		Tons.		Tons.	Tons.	Ft. in.	Knots.
1 1,250.05		Twin screw vertical triple expansion; Scotch.	18.71	5,227	.....	15.75	200	355	16 8	3,280
2 1,250.05		Twin screw vertical triple expansion; Scotch.	18.44	5,451	2,054	15.75	200	335	16 8	2,850
3 1,250.05		Twin screw vertical triple expansion; Scotch.	19.05	5,580	.....	15.75	200	340	16.11	3,200

Comple- ment.		Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first com- mission.
Offi- cers.	Men.							
1 16	252	\$612,500	Sept. 7, 1888	Nov. 2, 1888	Feb., 1890	Oct. 28, 1891	May 2, 1892	July 20, 1893
2 14	257	674,000	Sept. 7, 1888	Nov. 11, 1889	Oct., 1890	Aug. 11, 1892	May 11, 1892	Apr. 2, 1894
3 20	232	612,500	Sept. 7, 1888	Nov. 2, 1889	Feb., 1890	Dec. 5, 1891	May 2, 1892	June 21, 1894

UNARMORED STEEL

	Name.	Rig.	By whom and where built or building.	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full-load displacement.
					Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	
					<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>
1	Bancroft ...	Schooner	Moore & Sons, Elizabethport, N. J.	In ordinary, navy-yard, Boston.	187 6	32 0	12 7	839	948
2	Bennington	Three-masted schooner.	N. F. Palmer & Co., Chester, Pa.	Repairing, navy-yard, Mare Island.	230 0	36 0	14 0	1,710	1,764
3	Castine	Schooner	Bath Iron Works, Bath, Me.	Navy-yard, League Island.	204 0	32 1½	12 0	1,177	1,318
4	Concord	Three-masted schooner.	N. F. Palmer & Co., Chester, Pa.	Repairing, navy-yard, Mare Island.	230 0	36 0	14 0	1,710	1,815
5	Don Juan de Austria. ^a	.....	Cartagena, Spain.	Asiatic Station	210 0	32 0	12 6	1,130	.....
6	General Almirante.	.....	.....	Asiatic Station	212 0	28 3	13 0	1,390	.....
7	Isla de Cuba. ^a	Two-masted schooner.	Sir W. G. Armstrong, Newcastle-on-Tyne, England.	Asiatic Station	192 0	30 0	12 3	1,125	.....
8	Isla de Luzon. ^a	Two-masted schooner.	Sir W. G. Armstrong, Newcastle-on-Tyne, England.	Asiatic Station	192 0	30 0	12 3	1,125	.....
9	Machias	Schooner	Bath Iron Works, Bath, Me.	North Atlantic Station.	204 0	32 1½	12 0	1,177	1,318
10	Petrel	Barkentine...	Columbian Iron Works, Baltimore, Md.	Repairing, navy-yard, Mare Island.	176 3	31 0	11 7	892	956
11	Topeka ^b	Brig	G. Howaldt, Kiel, Germany.	Training ship.	250 0	35 0	17 9	2,300	2,390
12	Yorktown ..	Three-masted schooner.	Wm. Cramp & Sons, Philadelphia, Pa.	Asiatic Station	230 0	36 0	14 0	1,710	1,921
13	Gunboat No. 15.	.....	.....	Contract not awarded.	.....	.....	.....	.....	.....

^aCaptured during war with Spain.^bIron training ship.

BUREAU OF CONSTRUCTION AND REPAIR.

VESSELS—GUNBOATS.

	Tonnage.		Type of engines and boilers.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
	Gross.	Net for Suez Canal.										
	Tons.	Tons.		Knots.		Tons.		Tons.	Tons.	Feet in.	Knots.	
1	719.61	.....	Twin screw vertical triple expansion; cylindrical.	14.37	1,213	832	9.52	100	136	14 0	3,169	1
2	1,067.92	480.56	Twin screw horizontal triple expansion; cylindrical.	17.5	3,436	1,708	18.72	200	373	16 7	4,262	2
3	780.14	397.90	Twin screw vertical triple expansion; cylindrical.	16.032	2,199	1,067.5	10.84	125	239	14 4	5,008	3
4	1,067.92	480.56	Twin screw horizontal triple expansion; cylindrical.	16.8	3,405	1,725	13.72	200	368	16 7	4,142	4
5	812.75	365.75	Single screw.....	a 14	a 1,600	.....	.....	.....	210	.....	.....	5
6	.....	.....	Single screw triple expansion.	10.5	770	.....	.....	.....	.....	16 0	.....	6
7	698.08	314.14	Twin screw triple expansion; horizontal.	a 14	a 1,000	.....	9.73	159	159	12 4	2,000	7
8	698.08	314.14	Twin screw triple expansion; horizontal.	a 14	a 1,000	.....	9.73	159	159	12 4	2,000	8
9	780.14	397.90	Twin screw vertical triple expansion; locomotive.	15.46	2,046	1,067.5	10.84	125	292.6	14 9	4,500	9
10	595.80	360.38	Single screw horizontal compound.	11.79	1,095	858	9.28	100	212	13 5	4,000	10
11	.....	.....	Twin screw horizontal compound; cylindrical.	a 16	a 2,000	.....	16	273	410	19 5	3,800	11
12	1,070.21	481.60	Single screw horizontal triple expansion; cylindrical.	16.14	3,392	1,745	13.72	200	380	16 7	3,624	12
13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13

a Estimated.

UNARMORED STEEL

	Name.	Batteries.			Water-tight deck.		Water-line protection—obturator material.		Extent of fire-proofed wood.
		Main.	Secondary.	Torpedo tubes.	Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.	
					Inch.	Inch.			
1	Bancroft ...	4 4" R. F. guns.	8 3-pdr. R. F. 1 1-pdr. R. F. 1 Colt.		$\frac{1}{8}$	$\frac{1}{4}$		1,309	1
2	Bennington	6 6" B. L. R.	4 6-pdr. R. F. 4 1-pdr. R. F. 2 Gatlings		$\frac{1}{4}$	$\frac{1}{4}$			(a) 2
3	Castine.....	8 4" R. F. guns.	4 6-pdr. R. F. 2 1-pdr. R. F. 1 Gatling		$\frac{1}{4}$	$\frac{1}{8}$	748.12		3
4	Concord	6 6" B. L. R.	2 6-pdr. R. F. 2 3-pdr. R. F. 2 37mm H. R. C.		$\frac{1}{4}$	$\frac{1}{4}$			(a) 4
5	{Don Juan de Austria. ^b	4 5" R. F. guns.	2 Gatlings 4 6-pdr. R. F. 4 Colts						5
6	General Alava.		2 42mm Nordenfelts. 4 11mm Nordenfelts.						6
7	{Isla de Cuba. ^b	4 4" R. F. guns.	4 6-pdr. R. F. 4 Colts	3	c 2 $\frac{1}{2}$	c 1 $\frac{1}{2}$			7
8	{Isla de Luzon. ^b	4 4" R. F. guns.	4 6-pdr. R. F. 4 Colts	3	c 2 $\frac{1}{2}$	c 1 $\frac{1}{2}$			8
9	Machias....	8 4" R. F. guns.	4 6-pdr. R. F. 2 1-pdr. R. F. 1 Colt		$\frac{1}{4}$	$\frac{5}{8}$		748	9
10	Petrel	4 6" B. L. R.	2 3-pdr. R. F. 1 1-pdr. R. F. G. 2 1-pdr. M. R. F. G.		$\frac{1}{4}$	$\frac{5}{8}$			(a) 10
11	Topeka ^d ...	6 4" R. F. guns.	2 Colts auto. 6 3-pdr. R. F. 2 1-pdr. R. F. 1 Colt						11
12	Yorktown ..	6 6" R. F. guns.	2 6-pdr. R. F. 2 3-pdr. R. F. 4 1-pdr. R. F.		$\frac{1}{4}$	$\frac{1}{4}$			12
13	Gunboat No. 16.		2 Colts						13

^a Joiner work above protective deck.^b Captured during war with Spain.^c Protected deck.^d Iron training ship.

BUREAU OF CONSTRUCTION AND REPAIR.

VESSELS—GUNBOATS—Continued.

	Comple- ment.		Contract price of hull and ma- chinery.	Date of act authoriz- ing the building.	Contract signed.	Keel laid.	Launched.	Contract date of comple- tion.	Date of first com- mission.	
	Officers.	Men.								
1	10	133	\$250,000	Sept. 7, 1888	July 18, 1890	Feb., 1891	Apr. 30, 1892	July 18, 1892	Mar. 3, 1893	1
2	10	191	490,000	Mar. 3, 1887	Nov. 15, 1887	June, 1888	June 3, 1890	May 15, 1889	June 20, 1891	2
3	11	143	318,500	Mar. 2, 1889	Apr. 12, 1890	Feb., 1891	May 11, 1892	Apr. 12, 1892	Oct. 22, 1894	3
4	10	181	490,000	Mar. 3, 1887	Nov. 15, 1887	May, 1888	Mar. 8, 1890	May 15, 1889	Feb. 14, 1891	4
5	....	129	^a 180,000	.....	.....	.....	1887	.....	.....	5
6	....	47	.....	.....	.....	.....	.....	.....	.....	6
7	8	134	^a 215,000	.....	.....	.....	1886	Dec., 1886	Apr. 11, 1900	7
8	8	134	^a 215,000	.....	.....	.....	1887	Dec., 1886	Apr. 11, 1900	8
9	10	143	318,500	Mar. 2, 1889	Apr. 12, 1890	Feb., 1891	Dec. 8, 1891	Apr. 12, 1892	July 20, 1893	9
10	8	126	247,000	Mar. 3, 1885	Dec. 22, 1886	Aug. 27, 1887	Oct. 13, 1888	Dec. 22, 1887	Dec. 10, 1889	10
11	21	131	.....	.....	.....	.....	1881	^b Apr. 2, 1898	.....	11
12	14	182	455,000	Mar. 3, 1885	Jan. 31, 1887	May 14, 1887	Apr. 28, 1888	Jan. 31, 1888	Apr. 23, 1889	12
13	....	.....	.....	May 4, 1898	.....	.....	.....	.....	.....	13

^a Estimated value.^b Date of purchase.

LIGHT-DRAFT

	Name.	Rig.	By whom and where built or building.	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.
					Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	
					<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>
1	Helena ^a	One military mast.	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	Asiatic Station.	250 9	40 0½	9 0	1,397	1,689 1
2	Nashville....	Schooner....	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	European Station.	220 0	38 1½	11 0	1,371	1,720 2
3	Wilmington ^a	One military mast.	Newport News Shipbuilding and Dry Dock Co., Newport News, Va.	Asiatic Station.	250 9	40 0½	9 0	1,397	1,689 3

LIGHT-DRAFT

Name.	Batteries.			Water-tight deck.		Water-line protection—obturating material.		Extent of fire-proofed wood.
	Main.	Secondary.	Torpedo tubes.	Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.	
				<i>Inch.</i>	<i>Inch.</i>			
1	Helena ^a	8 4" R. F. guns. { 4 6-pdr. R. F. .. 4 1-pdr. R. F. .. 2 Colts..... }	.....	½	⅞	.....	.....	{ Decks and joiner work. } 1
2	Nashville....	8 4" R. F. guns. { 4 6-pdr. R. F. .. 2 1-pdr. R. F. .. 2 Colts..... }	.....	½	⅞	.....	.....	{ Decks and joiner work. } 2
3	Wilmington ^a	8 4" R. F. guns. { 4 6-pdr. R. F. .. 4 1-pdr. R. F. .. 4 Colts..... }		½	⅞			{ Decks and joiner work. } 3

^a Plate on side 1 inch thick.

BUREAU OF CONSTRUCTION AND REPAIR.

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GUNBOATS.

	Tonnage.		Type of engines and boilers.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	
	Gross.	Net for Suez Canal.										
	Tons.	Tons.		Knots.		Tons.		Tons.	Tons.	Ft. in.	Knots.	
1	1,373.54	920.937	Twin screw vertical triple expansion; Scotch.	15.50	1,988	1,340	17.08	100	300	11 9 $\frac{1}{4}$	2,200	1
2	1,197.40	755.61	Twin screw vertical quadruple expansion; Scotch and Yarrow.	16.30	2,536	1,364	13.16	150	400	13 4 $\frac{1}{4}$	3,400	2
3	1,373.54	920.937	Twin screw vertical triple expansion; Scotch.	15.08	1,894	1,342	17.08	100	300	11 9 $\frac{1}{4}$	2,200	3

GUNBOATS.

	Comple- ment.		Contract price of hull and ma- chinery.	Date of act authoriz- ing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first com- mission.	
	Officers.	Men.								
1	10	173	\$280,000	Mar. 3, 1893	Jan. 29, 1894	Oct. 11, 1894	Jan. 30, 1896	Jan. 29, 1896	July 8, 1897	1
2	11	167	280,000	Mar. 3, 1893	Jan. 22, 1894	Aug. 9, 1894	Oct. 19, 1895	Jan. 22, 1896	Aug. 19, 1897	2
3	10	189	280,000	Mar. 3, 1893	Jan. 29, 1894	Oct. 8, 1894	Oct. 19, 1895	Jan. 29, 1896	May 13, 1897	3

UNARMORED COMPOSITE

	Name.	Rig.	By whom and where built or building.	Condition or service. June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Full load displacement.
					Length of load water line.	Extreme breadth.	Mean draft.	Displacement.	
					<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>
1	Annapolis ..	Barkentine.	Lewis Nixon, Elizabethport, N. J.	Asiatic Station.	168 0	36 0	12 5	1,060	1,116 1
2	Dubuque ...	Schooner ...	Completing plans.....	.....	174 0	35 0	12 3	1,050	 2
3	Marietta....	Schooner ...	Union Iron Works, San Francisco, Cal.	North Atlantic Station.	174 0	34 0	12 0	1,000	1,058 3
4	Newport....	Barkentine.	Bath Iron Works, Bath, Me.	Training station, Newport, R. I.	168 0	36 0	12 0	1,000	1,128 4
5	Paducah....	Schooner...	Completing plans.....	.....	174 0	35 0	12 3	1,050	 5
6	Princeton ..	Barkentine.	J. H. Dialogue & Son, Camden, N. J.	Asiatic Station.	168 0	36 0	12 9½	1,100	1,128 6
7	Vicksburg ...	Barkentine.	Bath Iron Works, Bath, Me.	Asiatic Station.	168 0	36 0	12 0	1,000	1,128 7
8	Wheeling...	Schooner ...	Union Iron Works, San Francisco, Cal.	Station ship Tutuila.	174 0	34 0	12 0	1,000	1,170 8

TRAINING SHIP—NAVAL

1	Chesapeake.	Ship	Bath Iron Works, Bath, Me.	Cadet practice ship, Naval Academy.	175 0	37 0	16 6	1,175	1,324 1
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BUREAU OF CONSTRUCTION AND REPAIR.

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VESSELS—GUNBOATS.

	Tonnage.		Type of engines and boilers.	Speed per hour on trial.	Indicated horsepower on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 48 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.	Material of bottom planking.	
	Gross.	Net for Suez Canal.											
	Tons.	Tons.		Knots.		Tons.		Tons.	Tons.	Ft. in.	Knots		
1	857.75	559.51	Single screw vertical triple expansion; Babcock & Wilcox.	13.17	1,227	943	10.75	100	225	13 10 1	5,328	Georgia pine.	1
2	.....	.....	Twin screw vertical triple expansion; water tube.	^a 12.50	.....	^a 1,050	.....	.....	.....	.....	.....	Yellow pine.	2
3	807.16	532.06	Twin screw vertical triple expansion; Babcock & Wilcox.	13.02	1,054	991	10.17	120	241	13 0	5,470	Oregon pine.	3
4	857.75	559.51	Single screw vertical triple expansion; Scotch.	12.29	1,008	972	10.75	100	^a 239	13 0	3,967	Georgia pine.	4
5	.....	.....	Twin screw vertical triple expansion; water tube.	^a 12.50	.....	^a 1,050	.....	.....	.....	.....	.....	Yellow pine.	5
6	857.75	559.51	Single screw vertical triple expansion; Scotch.	^a 12	^a 800	.....	10.75	100	239	14 5	.....	Georgia pine.	6
7	857.75	559.51	Single screw vertical triple expansion; cylindrical.	12.71	1,118	964	10.75	100	^a 239	12 9	4,000	Georgia pine.	7
8	807.16	532.06	Twin screw vertical triple expansion; Scotch.	12.88	1,081	1,000	10.17	120	241	13 8	4,000	Oregon pine.	8

ACADEMY—SHEATHED.

1	905.27		(b)				10.86					Georgia pine.	1
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^a Estimated.^b Sailing ship.

UNARMORED COMPOSITE

	Name.	Batteries.		Water-tight deck.		Extent of fireproofed wood.	
		Main.	Secondary.	Slopes.	Flat.		
1	Annapolis	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 1 Colt ..			Decks and joiner work	1
2	Dubuque	6 4" R. F. guns ..	{ 2 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 2 Colts ..			Above protective deck	2
3	Marietta	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 1 Colt ..			Decks and joiner work	3
4	Newport	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 1 Colt ..			Decks and joiner work	4
5	Paducah	6 4" R. F. guns ..	{ 2 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 2 Colts ..			Above protective deck	5
6	Princeton	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 1 Colt ..			Decks and joiner work	6
7	Vicksburg	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 1 Colt ..			Decks and joiner work	7
8	Wheeling	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 1 Colt ..			{ Joiner work, berth deck, and after port gun deck. }	8

TRAINING SHIP—

1	Chesapeake ..	6 4" R. F. guns ..	{ 4 6-pdr. R. F. G.. 2 1-pdr. R. F. G.. 2 Colts ..			All joiner work	1
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VESSELS—GUNBOATS—Continued.

	Comple- ment.		Contract price of hull and machin- ery.	Date of act authorizing the build- ing.	Contract signed.	Keel laid.	Launched.	Contract date of com- pletion.	Date of first commission.	
	Officers.	Men.								
1	11	136	\$227,700	Mar. 2, 1895	Nov. 20, 1895	Apr., 1896	Dec. 23, 1896	Feb. 20, 1897	July 20, 1897	1
2	.....	.....	.....	July 1, 1902	.....	.....	.....	.....	.....	2
3	11	134	223,000	Mar. 2, 1895	Nov. 26, 1895	Apr. 13, 1896	Mar. 18, 1897	Feb. 26, 1897	Sept. 1, 1897	3
4	11	108	229,400	Mar. 2, 1895	Nov. 15, 1895	Mar., 1896	Dec. 5, 1896	Feb. 15, 1897	Oct. 5, 1897	4
5	.....	.....	.....	July 1, 1902	.....	.....	.....	.....	.....	5
6	11	130	230,000	Mar. 2, 1895	Nov. 20, 1895	May, 1896	June 3, 1897	Feb. 20, 1897	May 27, 1898	6
7	11	128	229,400	Mar. 2, 1895	Nov. 15, 1895	Mar., 1896	Dec. 5, 1896	Feb. 15, 1897	Oct. 23, 1897	7
8	9	129	219,000	Mar. 2, 1895	Nov. 26, 1895	Apr. 11, 1896	Mar. 18, 1897	Feb. 26, 1897	Aug. 10, 1897	8

NAVAL ACADEMY—SHEATHED.

1		256	\$112,600	{Mar. 3, 1897 July 19, 1897}	Mar. 16, 1898	Aug. 2, 1898	June 20, 1899	June 16, 1899	Apr. 12, 1900	1
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UNARMORED STEEL VES

	Name.	Type.	Rig.	By whom and where built or building.	
1	Dolphin	Steel dispatch boat.....	Three-masted schooner.	John Roach & Sons, Chester, Pa ...	1
2	Vesuvius	Steel dynamite gunboat.....		Wm. Cramp & Sons, Philadelphia, Pa.	2

	Name.	Speed per hour on trial.	Maximum indicated horse-power on trial.	Displacement on trial.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 48 cubic feet per ton.	Maximum draft aft at lowest point of keel. Ship ready for sea, bunkers full.	Steaming radius, at 10 knots per hour.	
1	Dolphin.....	<i>Knots.</i> 15.50	2,253	<i>Tons.</i> 1,413	13.31	<i>Tons.</i>	<i>Tons.</i> 273.74	<i>Fl.</i> 17 <i>in.</i> 1½	<i>Knots.</i> 3,180	1
2	Vesuvius.....	21.42	3,794.86	793	10.65	.....	152.2	11 2½	1,800	2

	Name.	Water-tight deck.		Water-line protection—obturating material.		Extent of fireproofed wood.	Complement.		
		Slopes.	Flat.	Cocoa, capacity in cubic feet.	Corn pith, capacity in cubic feet.		Officers.	Men.	
1	Dolphin .....	.....	.....	.....	.....	.....	7	125	1
2	Vesuvius	½	½	.....	.....	.....	6	63	2

BUREAU OF CONSTRUCTION AND REPAIR.

SELS—SPECIAL CLASS.

	Condition or service June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.				Tonnage.		Type of engines and boilers.	
		Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	Gross.	Net for Suez Canal.		
1	Special service..	<i>Ft. in.</i> 240 0	<i>Ft. in.</i> 32 0	<i>Ft. in.</i> 14 3	<i>Tons.</i> 1,486	<i>Tons.</i> 915.51	<i>Tons.</i>	Single-screw vertical compound; Scotch.	1
2	In ordinary, navy-yard, Boston, Mass.	252 4	26 6½	10 7½	929	579.98	.....	Twin-screw vertical triple expansion; marine locomotive.	2

Batteries.				
Main.		Secondary.		Torpedo tubes.
1	2 4" R. F. guns.....	{ 1 6-pdr. R. F. G..... 6 3-pdr. R. F. G..... 2 Colts		1
2	3 15" dynamite guns.....	{ 3 3-pdr. R. F. G..... 2 Colts		2

	Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commission.	
1	\$315,000	Mar. 3, 1883	July 23, 1883	Oct. 11, 1883	Apr. 12, 1884	July 23, 1884	Dec. 8, 1885	1
2	350,000	Aug. 3, 1886	Feb. 11, 1887	Sept., 1887	Apr. 28, 1888	Feb. 11, 1888	June 7, 1890	2

UNARMORED VESSELS—

	Name.	Material.	Rig.	By whom and where built or building.	Condition or service June 30, 1902.	
1	Albaya ^a	Iron ..	Schooner ..	Hongkong and Whampoa Dock Co.	Asiatic Station.....	1
2	Alvarado ^b	Steel ..	.....	Clydebank, England	Naval Academy, Annapolis	2
3	Arayat ^b	Iron ..	Schooner ..	Manila Slip Co., Cafiacao.	Asiatic Station	3
4	Basco ^a	Iron ..	Schooner ..	.....	Asiatic Station.....	4
5	Calamianes ^a	Iron ..	Schooner ..	.....	Asiatic Station.....	5
6	Callao ^b	Steel ..	Schooner ..	Manila Slip Co., Cafiacao.	Asiatic Station.....	6
7	Elcano ^a	Iron ..	Schooner ..	.....	Asiatic Station	7
8	Gardoquia ^a	Iron ..	Schooner ..	.....	Asiatic Station	8
9	Leyte ^b	Iron ..	Schooner ..	Whampoa, Hongkong	Asiatic Station.....	9
10	Manileño ^a	Iron ..	Schooner ..	Hongkong and Whampoa Dock Co.	Asiatic Station.....	10
11	Mariveles ^a	Iron ..	Schooner ..	.....	Asiatic Station	11
12	Mindanao ^a	Iron ..	.....	Arsenal, Cavite.....	Asiatic Station.....	12
13	Mindoro ^a	Iron ..	Schooner ..	.....	Asiatic Station.....	13
14	Pampanga ^a	Iron ..	Schooner ..	Manila Slip Co., Cafiacao.	Asiatic Station	14
15	Panaya ^a	Iron ..	Schooner ..	.....	Asiatic Station.....	15
16	Paragua ^a	Iron ..	Schooner ..	Manila Slip Co., Cafiacao.	Asiatic Station.....	16
17	Quirosa ^a	Comp.	Brigantine	Hongkong and Kowloon Dock Co., Hongkong, China.	Asiatic Station.....	17
18	Samar ^b	Iron ..	Schooner ..	Manila Slip Co., Cafiacao.	Asiatic Station.....	18
19	Sandoval ^b	Steel ..	.....	Clydebank, England	Naval Academy, Annapolis.	19
20	Urdaneta ^a	Iron ..	.....	Arsenal, Cavite.....	Asiatic Station	20
21	Villalobos ^a	Comp.	Brigantine	.....	Asiatic Station.....	21

^aOriginally purchased by War Department.^bCaptured during war with Spain.

GUNBOATS UNDER 500 TONS.

Ships fully equipped ready for sea, all stores on board. Normal coal supply.				Tonnage.		Type of engines and boilers.	Speed per hour.	Maximum indicated horse-power.	Tons per inch immersion at normal draft.	Normal coal supply.	Bunker capacity at 43 cubic feet per ton.	Maximum draft aft. Ship ready for sea, bunkers full.	Steaming radius at 10 knots per hour.
Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	Gross.	Net for Suez Canal.								
<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>		<i>Knots.</i>			<i>Tons</i>	<i>Tons</i>	<i>Ft. in.</i>	
1 99 6	17 6		151			Twin screw vertical; 1 Scotch.		125				7 9	1
2 110 0	15 6 1/2	5 6	106	88.5		Single screw.	19		2.7		16	6 3	2
3 115 6	17 10	6 6				Twin screw; 1 Scotch.						7 6	3
4 69 3	12 0	5 0	42			Single screw; 1 Scotch.		44				6 0	4
5 29 6	17 6	7 0	151			Twin screw; 1 Scotch.		125				7 9	5
6 115 6	17 10	6 6	208			Twin screw; 1 Scotch.	19.7	250			321	7 6	6
7 157 11	25 9	10 0	560			Twin screw; 2 Scotch.		600				12 0	7
8 69 3	12 0	5 0	42			Single screw; 1 Scotch.		44				6 0	8
9 99 6	17 6	7 0	151			Twin screw vertical compound; 1 Scotch.	18	120	2.5	25	25	7 9	9
10 100 6	16 0	6 9	142			Two vertical inclined compound; 1 Scotch.	17	125	1.75	21	21	7 0	10
11 100 6	16 0	6 9	142			Two vertical inclined compound; 1 Scotch.		125				7 0	11
12 102 3	16 2	5 9	174			Twin screw; 1 Scotch.		100				6 9	12
13 100 6	16 0	6 9	142			Twin screw; 1 Scotch.		125				7 0	13
14 115 6	17 10	6 6	201			Twin screw; 1 Scotch.		250				7 6	14
15			142			Twin screw; 1 Scotch.		125					15
16 115 6	17 10	6 6	201			Twin screw; 1 Scotch.		250				7 6	16
17 145 0	22 6		350			Triple expansion; 1 Scotch.	13	550			78		3,800 17
18 115 3	17 10	6 6	210			Twin screw vertical compound return-fire tubular boilers, cylindrical; 1 Scotch.	10.5	250	3	30	33	7 6	1,000 18
19 110 0	15 6 1/2	5 6	106	88.5		Single screw.	19		2.7		16	6 1	19
20 70 5	12 3	4 9	42			Vertical compound; 1 Scotch.	8	44	1.7	6	6.5	6 2	20
21			347			Triple expansion; 1 Scotch.		500					21

e Estimated.

d Over all.

UNARMORED VESSELS—

	Name.	Batteries.			
		Main.	Secondary.	Torpedo tubes.	
1	Albaya ^a		{1 6-pdr..... 1 Colt.....	}	1
2	Alvarado ^b		{2 3-pdr..... 2 Colts.....	}	2
3	Arayat.....				3
4	Basco ^a		{1 1-pdr..... 1 Colt.....	}	4
5	Calamianes ^a				5
6	Callao ^b		{1 6-pdr..... 1 3-pdr..... 2 1-pdr..... 1 Colt..... 4 4" R. F. G.....	}	6
7	Elcano ^b		{4 6-pdr..... 2 Colts.....	}	7
8	Gardoqui ^a		{2 1-pdr..... 1 Colt.....	}	8
9	Leyte ^b		{1 6-pdr..... 2 1-pdr..... 1 Colt.....	}	9
10	Manileño ^a		{1 6-pdr..... 1 Colt..... 2 37 ^{mm} H. R. C..... 2 Gatlings.....	}	10
11	Mariveles ^a		{1 3-pdr..... 1 37 ^{mm} R. C..... 1 Gatling.....	}	11
12	Mindanao ^a				12
13	Mindora ^a		{1 3-pdr..... 1 37 ^{mm} R. C..... 1 Gatling.....	}	13
14	Pampanga ^a				14
15	Panay ^a		{1 6-pdr..... 1 3-pdr..... 2 1-pdr..... 1 Colt.....	}	15
16	Paragua ^a				16
17	Quiros.....	26-pdr. R. F. Nordenfeldt.	2 37 ^{mm} R. C.....		17
18	Samar ^a	1 6-pdr.....	{1 3-pdr. H..... 2 1-pdr. H..... 1 Colt.....	}	18
19	Sandoval ^b		{2 3-pdr..... 2 Colts.....	}	19
20	Urdaneta ^a		{1 1-pdr..... 1 37 ^{mm} 1 Colt.....	}	20
21	Villalobos.....		{2 6-pdr..... 1 Colt.....	}	21

^a Originally purchased by War Department.^b Captured during war with Spain.

GUNBOATS UNDER 500 TONS.

	Complement.		Purchase price.	Date of purchase.	Keel laid.	Launched.	Date of completion.	Date of first commission.	
	Officers.	Men.							
1		23							1
2		21							2
3		23							3
4		14							4
5		23							5
6		28							6
7		95							7
8									8
9	2	23					1890	Mar. 22, 1900	9
10	2	23						May 26, 1899	10
11		23							11
12									12
13		23							13
14		28							14
15		23							15
16		28							16
17		41					1896		17
18	2	28					1889	May 26, 1899	18
19		23							19
20	1	14		March, 1899			1882	May 12, 1899	20
21		41							21

UNARMORED STEEL VESSELS—

	Name.	By whom and where built or building.	Condition or service, June 30, 1902.	Ship fully equipped ready for sea, all stores on board. Normal coal supply.					
				Length on load water line.	Extreme breadth.	Mean draft.	Displacement.	Full load displacement.	
				<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	
1	Bainbridge ...	Neafie & Levy, Philadelphia, Pa	Building .	245 0	23 7½	6 6	420	535	1
2	Barry	Neafie & Levy, Philadelphia, Pa	Building .	245 0	23 7½	6 6	420	535	2
3	Chauncey	Neafie & Levy, Philadelphia, Pa	Building .	245 0	23 7½	6 6	420	535	3
4	Dale	Wm. R. Trigg Co., Richmond, Va.	Building .	245 0	23 7½	7 0	420	678	4
5	Decatur	Wm. R. Trigg Co., Richmond, Va.	Torpedo boat flotilla.	245 0	23 7½	7 0	420	678	5
6	Hopkins	Harlan & Hollingsworth Co., Wilmington, Del.	Building .	244 0	24 6	6 0	408	537	6
7	Hull	Harlan & Hollingsworth Co., Wilmington, Del.	Building .	244 0	24 6	6 0	408	537	7
8	Lawrence	Fore River Ship and Engine Co., Quincy, Mass.	Building .	240 10	22 3	6 6½	402	520	8
9	Macdonough .	Fore River Ship and Engine Co., Quincy, Mass.	Building .	240 10	22 3	6 6½	402	520	9
10	Paul Jones....	Union Iron Works, San Francisco, Cal.	Building .	245 6	23 6½	7 2½	480	.....	10
11	Perry	Union Iron Works, San Francisco, Cal.	Navy-yard Mare Island.	245 6	23 6½	7 2½	480	.....	11
12	Preble	Union Iron Works, San Francisco, Cal.	Navy-yard Mare Island.	245 6	23 6½	7 2½	480	.....	12
13	Stewart	Gas Engine and Power Co. and Chas. L. Seabury & Co., Consolidated, Morris Heights, N. Y.	Building .	245 0	23 7½	6 6	420	535	13
14	Truxtun	Maryland Steel Co., Sparrows Point, Md.	Building .	248 0	23 3	6 0	433	610	14
15	Whipple	Maryland Steel Co., Sparrows Point, Md.	Building .	248 0	23 3	6 0	433	610	15
16	Worden	Maryland Steel Co., Sparrows Point, Md.	Building .	248 0	23 3	6 0	433	610	16

^a Draft is measured from line tangent to keel and tips of propeller blades.

BUREAU OF CONSTRUCTION AND REPAIR.

SUBMARINE BOATS.

Main engine.			Main motor.			Gasoline tank capacity.	Armament.			
Type.	Indicated horsepower.	Speed for full power on surface.	Type.	Indicated horsepower.	Speed when a wash or submerged.		Torpedo tubes.	Torpedoes.		
1	Single-screw 4-cylinder Otto gasoline.	160	Knots. 8	Electric waterproof.	70	Knots. 7	Galls. 767	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	1
2	Single-screw 4-cylinder Otto gasoline.	160	8	Electric waterproof.	70	7	850	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	2
3	Single-screw Otto gasoline.	45	8	.....	50	.....	.....	1 torpedo tube, 1 dynamite gun.	.....	3
4	Single-screw 4-cylinder Otto gasoline.	160	8	Electric waterproof.	70	7	767	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	4
5	Single-screw 4-cylinder Otto gasoline.	160	8	Electric waterproof.	70	7	850	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	5
6	Single-screw 4-cylinder Otto gasoline.	160	.....	Electric waterproof.	70	7	1,148	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	6
7	Single-screw 4-cylinder Otto gasoline.	160	8	Electric waterproof.	70	7	767	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	7
8	Single-screw 4-cylinder Otto gasoline.	160	8	Electric waterproof.	70	7	767	1 torpedo-expulsion tube.	5 45 c. m. by 11'8" White-head torpedoes.	8

BOATS.

	Contract price of hull and machinery.	Date of act authorizing the building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	Date of first commission.	
1	\$170,000	June 7, 1900	Aug. 25, 1900	Oct. 3, 1900	July 22, 1902	Apr. 25, 1901	.....	1
2	170,000	June 7, 1900	Aug. 25, 1900	.....	.....	Apr. 25, 1901	.....	2
3	^a 150,000	.....	.....	.....	.....	^b Apr. 11, 1900	Oct. 12, 1900	3
4	170,000	June 7, 1900	Aug. 25, 1900	Nov. 8, 1900	Aug. 20, 1901	May 25, 1901	.....	4
5	170,000	June 7, 1900	Aug. 25, 1900	.....	.....	May 25, 1901	.....	5
6	170,000	Mar. 3, 1893	Nov. 19, 1900	May 21, 1901	Feb. 1, 1902	Oct. 19, 1901	.....	6
7	170,000	June 7, 1900	Aug. 25, 1900	Dec. 13, 1900	Sept. 23, 1901	June 25, 1901	.....	7
8	170,000	June 7, 1900	Aug. 25, 1900	Jan. 11, 1901	Oct. 19, 1901	July 25, 1901	.....	8

^a Purchase price.

^b Date of purchase.

IRON AND WOODEN

	Name.	Built.			Condition or service June 30, 1902.	Rig.	
		When.	Where.	By whom.			
IRON.							
1	Alert	1873-1875	Chester, Pa	John Roach	Training ship, Pacific station.	Barkentine	1
2	Monocacy .	1863	Baltimore, Md...	A. & W. Denmead & Son.	Asiatic station....	Schooner..	2
3	Michigan..	1844	Erie, Pa	United States.....	Sp'c'l serv., North-western Lakes.	Schooner..	3
4	Pinta	1865	Chester, Pa	Reany, Son & Archbold.	Naval Militia, San Diego, Cal.	Schooner..	4
5	Ranger	1873-1876	Wilmington, Del.	Harlan & Hollingsworth.	Special service ...	Barkentine	5
6	Reina Mercedes.	1887	Cartagena .....	.....	Dismantled, navy-yard, Portsmouth, N. H.	.....	6
WOODEN.							
1	Adams	1874-1876	Boston, Mass	United States and Donald Mackay.	Mare Island Navy-Yard.	Bark	1
2	Enterprise.	1873-1876	Kittery, Me.....	John W. Griffith and United States.	Public Marine School, Boston, Mass.	Bark	2
3	Essex.....	1874-1876	Kittery and Boston.	United States and Donald Mackay.	Training service, Navy.	Bark	3
4	Hartford ..	1858	Boston, Mass	United States.....	Training ship for landmen.	Bark	4
5	Lancaster .	1858	Philadelphia, Pa.	United States.....	Training ship for landmen.	Ship	5
6	Mohican ..	1872-1883	Mare Island, Cal.	United States.....	Training ship for landmen.	Bark	6

STEAM VESSELS

	Dimensions.			Displacement.	Tonnage.		Indicated horsepower.	Speed per hour.	Batteries.		Bunker capacity.	Complement.	
	Length between perpendiculars.	Breadth.	Mean draft.		Gross.	Net, for Suez Canal.			Main.	Secondary.		Officers.	Men.
	<i>Fl. in.</i>	<i>Fl. in.</i>	<i>Fl. in.</i>	<i>Tons</i>	<i>Tons.</i>	<i>Tons.</i>		<i>Kts.</i>			<i>Tons</i>		
1	177 4	32 0	13 0	1,110	882.27	713.00	500	10	6 4" R. F. G...	{ 4 6-pdr..... 1 Colt.....	197	10	233 1
2	255 0	35 0	9 0	1,370	.....	.....	850	11.2	.....	{ 4 37mm H. R. C. 2 Gatlings	230	12	147 2
3	163 3	27 1½	9 0	685	491.59	.....	365	10.5	.....	{ 6 6-pdr..... 2 1-pdr.....	115	.....	89 3
4	137 0	26 0	10 0	550	355.46	.....	310	8.5	.....	{ 2 Gatlings	111	8	77 4
5	177 4	32 0	13 0	1,261	882.27	.....	500	10	6 4" R. F. G...	{ 4 6 pdr..... 1 Colt.....	178	9	139 5
6	292 0	43 3	21 11	3,090	.....	.....	.....	.....	.....	.....	.....	.....	6
1	187 3	35 0	14 9½	1,400	663.37	.....	800	9.8	6 4" R. F. G...	{ 2 6-pdr..... 2 1-pdr..... 2 Colts.....	141	.....	282 1
2	185 0	35 0	14 3	1,375	.....	.....	800	11.4	.....	.....	130	.....	2
3	185 0	35 0	14 3	1,375	.....	.....	800	10.4	6 4" R. F. G...	{ 4 6-pdr..... 2 1-pdr..... 2 Colts.....	155	15	172 3
4	226 0	44 0	18 2	2,790	1,838.40	.....	2,000	12	13 5" R. F. G...	{ 8 6-pdr..... 4 1-pdr..... 1 3" field	262	14	462 4
5	235 8	46 0	19 2	3,250	2,119.64	.....	1,000	9.6	10 5" R. F. G...	{ 6 6-pdr..... 2 1-pdr.....	326	.....	483 5
6	216 0	37 0	16 6	1,900	671.20	.....	1,000	10.65	6 4" R. F. G...	{ 4 6-pdr..... 2 1-pdr..... 2 Colts.....	168	18	386 6

WOODEN SAIL

	Name.	Built.			Condition or service June 30, 1902	Rig.	
		When.	Where.	By whom.			
1	Alliance.....	1873-76	Norfolk, Va.....	United States...	Training service, Navy.	Bark ...	1
2	Constellation.	1854	Norfolk, Va.....	United States...	Training ship, Newport, R. I.	Ship	2
3	Jamestown...	1845	Norfolk, Va.....	United States...	Transferred to Marine- Hospital Service.	Ship	3
4	Monongahela	1862	Philadelphia, Pa.	United States...	Training service for apprentices.	Ship	4
5	Portsmouth ..	1843	Kittery, Me.....	United States...	For use of Naval Militia, New Jersey.	Ship	5
6	Saratoga.....	1842	Kittery, Me.....	United States...	Public Marine School, Philadelphia, Pa.	Ship	6
7	St. Mary's	1844	Washington, D. C.	United States...	Public Marine School, New York, N. Y.	Ship	7

STEEL, IRON, AND

	Name.	Built.		Material.	
		Where.	By whom.		
1	Accomac	Newport News, Va.....	Newport News Shipbuilding and Dry Dock Co.	Iron	1
2	Active.....	San Francisco, Cal.....	Union Iron Works.....	Steel....	2
3	Alice	Tompkins Cove, N. Y.....	Rodermond & Co.....	Wood....	3
4	Apache.....	Tottenville, N. Y.....	A. C. Brown.....	Wood....	4
5	Chickasaw	Camden, N. J.....	J. H. Dialogue.....	Iron	5
6	Choctaw.....	Philadelphia, Pa.....	Neafie & Levy	Iron	6
7	Fortune.....	Boston, Mass.....	James Tetlow	Iron	7
8	Hercules.....	Camden, N. J.....	J. H. Dialogue & Son.....	Iron	8
9	Iroquois.....	San Francisco, Cal.....	Union Iron Works.....	Steel....	9
10	Iwana.....	Boston, Mass.....	City Point Iron Works.....	Steel....	10
11	Leyden.....	Boston, Mass.....	James Tetlow	Iron	11
12	Massasoit.....	Philadelphia, Pa.....	Neafie & Levy	Steel....	12
13	Modoc.....	Camden, N. J.....	J. H. Dialogue & Son.....	Iron	13
14	Mohawk.....	Newburg, N. Y.....	T. S. Marvel & Co.....	Steel....	14
15	Narkeeta.....	Boston, Mass.....	City Point Iron Works.....	Steel....	15
16	Nezinscot.....	Philadelphia, Pa.....	Neafie & Levy	Steel....	16
17	Nina.....	Chester, Pa.....	Reany, Son & Archbold	Iron	17
18	Osceola.....	Philadelphia, Pa.....	Chas. Hillman.....	Steel....	18
19	Pawnee	Tompkins Cove, N. Y.....	Rodermond & Co.....	Wood....	19
20	Pawtucket	Mare Island, Cal.....	Government.....	Steel....	20
21	Penacook.....	New York, N. Y.....	Government.....	Steel....	21
22	Piscataqua ^a	West Bay City, Mich.....	F. W. Wheeler & Co.....	Steel....	22
23	Pontiac.....	Athens, N. Y.....	Peter McGiehan.....	Wood....	23
24	Potomac.....	West Bay City, Mich.....	F. W. Wheeler & Co.....	Steel....	24
25	Powhatan	Baltimore, Md.....	Maryland Steel Co	Steel....	25
26	Rapido			Wood....	26
27	Samoset	Norfolk, Va.....	Government.....	Steel....	27
28	Sebago.....	Camden, N. J.....	J. H. Dialogue & Son.....	Steel....	28
29	Siox.....	Philadelphia, Pa.....	Neafie & Levy	Iron	29
30	Standish.....	Boston, Mass.....	James Tetlow	Iron	30
31	Tecumseh.....	Camden, N. J.....	J. H. Dialogue & Son.....	Steel....	31
32	Trafic.....	South Brooklyn, N. Y.....	D. McCarty.....	Wood....	32
33	Triton.....	Camden, N. J.....	J. H. Dialogue.....	Steel....	33
34	Unadilla.....	Mare Island, Cal.....	Government.....	Steel....	34
35	Uncas.....	Camden, N. J.....	J. H. Dialogue.....	Steel....	35
36	Vigilant.....	Philadelphia, Pa.....	Wm. Cramp & Son.....	Steel....	36
37	Waban	Philadelphia, Pa.....	Wm. Cramp & Son.....	Iron	37
38	Wahneta.....	Boston, Mass.....	City Point Iron Works.....	Steel....	38
39	Wompatuck.....	Wilmington, Del.....	Harlan & Hollingsworth	Steel....	39
40	No. 8.....	Boston, Mass.....	Government.....	Steel....	40
41	No. 9.....	Mare Island, Cal.....	Government.....	Steel....	41

^a Have towing machine.

ING VESSELS.

	Dimensions.			Displacement.	Tonnage.		Batteries.		Comple- ment.		
	Length between perpendiculars.	Breadth.	Mean draft.		Gross.	Net, for Suez Canal.	Main.	Secondary.	Officers.	Men.	
	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>					
1	185 0	35 0	14 3	1,375			6 4" R. F.	{ 4 6-pdr..... 2 1-pdr..... 2 Colts..... 6 6-pdr..... 4 1-pdr..... 2 Colts..... 2 3" field..... }	18	325	1
2	176 0	42 0	20 0	1,970	1,235.54				15	173	2
3	163 6	36 6	16 0	1,150	888.23						3
4	223 0	38 0	16 6	2,100	960.45		6 4" R. F.	{ 4 6-pdr..... 1 3" field..... 2 Colts..... }	21	387	4
5	153 0	38 3	16 6	1,125	846.30				15		5
6	147 6	36 1	16 0	1,025	757.72						6
7	150 0	37 6	15 6	1,025	766.84						7

WOODEN STEAM TUGS.

	Condition or service June 30, 1901.	Rig.	Dimensions.			Dis- place- ment.	
			Length.	Breadth.	Mean draft.		
			<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	
1	Navy-yard, Pensacola.....		90 0	19 0	9 0	187	1
2	Navy-yard, Mare Island.....	Light signal mast.	b 107 0	22 6	10 0	296	2
3	Navy-yard, Norfolk, Va.....	One mast and one derrick.	101 9	25 6	8 0	356	3
4	Navy-yard, New York.....	Two masts.....	141 6	29 0	10 0	650	4
5	Navy-yard, New York.....		77 2½	18 0	8 0	c 100	5
6	Navy-yard, Norfolk.....		91 4½	21 0	10 0	c 350	6
7	Navy-yard, Boston (in ordinary).....	Schooner.....	c 137 0	26 0	9 6	450	7
8	Navy-yard, Norfolk.....	Schooner.....	101 6	20 6	9 0	198	8
9	Naval Station, Hawaii.....	Schooner.....	b 152 0	26 0	13 6	702	9
10	Navy-yard, Boston.....		c 92 6	20 11½	8 0	192.4	10
11	Torpedo Station, Newport, R. I.....	Schooner.....	c 137 0	26 0	9 6	450	11
12	Naval Station, Key West, Fla.....		d 89 5	19 0	8 6	202.45	12
13	Navy-yard, League Island.....		d 96 9	20 10	9 3	240.76	13
14	Navy-yard, Norfolk.....		c 104 0	24 0	11 0	420	14
15	Navy-yard, New York.....		c 92 6	20 11½	8 0	192.4	15
16	Navy-yard, Portsmouth, N. H.....		c 85 0	19 0	8 0	156	16
17	Navy-yard, New York.....	Schooner.....	c 137 0	26 0	8 6	357	17
18	Naval Station, Key West.....	Schooner.....	125 5	26 3	14 0	571	18
19	Navy-yard, New York.....	One mast, one der- rict.	112 0	27 3	7 0	275	19
20	Puget Sound Naval Station.....	Schooner.....	c 92 6	21 1	8 9	225	20
21	Naval Station, Port Royal.....	Schooner.....	c 92 6	21 1	9 0	230	21
22	Asiatic Station (Cavite).....		c 149 0	28 7	12 0	854	22
23	Navy-yard, New York.....	One mast, one der- rict.	124 4	27 0	9 6	401	23
24	Naval Station, San Juan, P. R.....	Two pole masts...	c 138 9	28 6	12 0	785	24
25	Navy-yard, New York.....		c 101 0	21 0	10 0	194	25
26	Asiatic Station (Cavite).....		81 6	15 9	7 0		26
27	Navy-yard, League Island.....		c 92 6	21 0	8 9	225	27
28	Navy-yard, Pensacola.....		90 0	21 0	f 8 0		28
29	Navy-yard, Portsmouth, N. H.....		c 84 6	19 0	8 0	155	29
30	Naval Academy, Annapolis.....	Schooner.....	c 137 0	26 0	9 6	450	30
31	Navy-yard, Washington.....	Schooner.....	88 6	21 6	9 3	214	31
32	Navy-yard, New York.....	Derrick mast.....	c 106 0	29 4	9 0	280	32
33	Navy-yard, Washington.....		c 96 9	20 9	9 0	212	33
34	Navy-yard, Mare Island.....	Schooner.....	c 110 0	25 0	9 10½	355	34
35	Navy-yard, Pensacola.....	Schooner.....	119 3	25 0	12 0	441	35
36	Training Station, Yerba Buena, San Francisco.	Schooner.....	b 116 0	21 0	9 0	300	36
37	Naval Station, Habana.....		85 0	17 6	8 0	150	37
38	Navy-yard, Norfolk.....		c 92 6	20 11½	8 0	192.4	38
39	Asiatic Station (Cavite).....	Schooner.....	117 6	25 6	12 0	462	39
40	Navy-yard, Boston, Mass.....	Schooner.....	c 92 6	21 1	9 0	230	40
41	Navy-yard, Mare Island.....	Schooner.....	c 92 6	21 1	9 0	230	41

b Over all. c Between perpendiculars. d On water line. e Estimated. f Maximum draft.

	Name.	Tonnage.		Indi- cated horse- power.	Speed.	Coal capacity.	Guns.	
		Gross.	Net for Suez Ca- nal.					
		Tons.	Tons.		Knots.	Tons.		
1	Accomac.....	130.16		250	10	35		1
2	Active.....	174		600	12	80		2
3	Alice.....	154.78		250	10	15		3
4	Apache.....	298.3		550	10	120		4
5	Chickasaw.....	70.02			10	20		5
6	Choctaw.....	152		188	10	70		6
7	Fortune.....	378.18		340	10	80	2 6-pdr., 3 1- pdr., 1 Colts.	7
8	Hercules.....	141.62			12	40		8
9	Iroquois.....	400		1,000	13.25	205		9
10	Iwami.....	157.71		300	11.5	35		10
11	Leyden.....	378.18		340	10	80		11
12	Massasoit.....	150.7				34		12
13	Modoc.....	184.09			10	40		13
14	Mohawk.....	160.87		400	12	32		14
15	Narkeeta.....	157.71		300	11.5	35		15
16	Nezinscot.....	117.74		400	10	40		16
17	Nina.....	330.24		388	11.12	80		17
18	Osceola.....	352.35			14	150		18
19	Pawnee.....	151.17		250	10	16		19
20	Pawtucket.....	157.71		450	12.2	30		20
21	Penacook.....	157.71		450	12	28		21
22	Piscataqua.....	518		2,000	16	328		22
23	Pontiac.....	238.25		425	10.5	45		23
24	Potomac.....	475		2,000	16	200	2 1-pdr., 2 Colts	24
25	Powhatan.....	156		397	13	57		25
26	Rapido.....							26
27	Samoset.....	157.71		450	12	30		27
28	Sebago.....	130			12	30		28
29	Sioux.....	111.38		290	10	45		29
30	Standish.....	330.24		340	10	80		30
31	Tecumseh.....	149.55		500	11	40		31
32	Traflic.....				10			32
33	Triton.....			300	13	45		33
34	Unadilla.....	289.59		500	12	65		34
35	Uncas.....	283.69		750	12	120		35
36	Vigilant.....	177		450	12	75		36
37	Waban.....	85.50			13	25		37
38	Wahneta.....	157.71		300	11.5	35		38
39	Wompatuck.....	324.13	92.56	650	13	130		39
40	No. 8.....	157.71		450	12	28		40
41	No. 9.....	157.71		450	12	28		41

BUREAU OF CONSTRUCTION AND REPAIR.

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WOODEN STEAM TUGS.

	Contract price of hull and machinery.	Date of act authorizing building.	Contract signed.	Keel laid.	Launched.	Contract date of completion.	
1				1891			1
2				1888			2
3				1893			3
4				1889			4
5				1882			5
6				1892			6
7				1865			7
8				1888			8
9				1892			9
10	\$32,438	Mar. 2, 1889	Dec. 20, 1890	Apr. 1891	Mar. 12, 1892	Dec. 20, 1891	10
11				1896			11
12				1898			12
13				1890			13
14				1893			14
15	32,438	Mar. 2, 1889	Dec. 20, 1890	Apr. 1891	Feb. 11, 1892	Dec. 20, 1891	15
16				1897			16
17				1865			17
18				1896			18
19				1896			19
20	a 50,000	Mar. 3, 1897	July 22, 1898	July 22, 1898	Nov. 17, 1898		20
21	a 50,000	Mar. 3, 1897		Feb. 8, 1898	Oct. 29, 1898		21
22				1897			22
23				1891			23
24				1897			24
25				1892			25
26							26
27	a 25,000	Mar. 2, 1895		Jan. 13, 1895	Mar. 20, 1897		27
28				1893			28
29				1892			29
30				1865			30
31				1896			31
32				1891			32
33				1888			33
34	a 80,000	July 26, 1894		Apr. 29, 1895	Sept. 21, 1895		34
35				1893			35
36				1883			36
37				1880			37
38	32,438	Mar. 2, 1889	Dec. 20, 1890	Apr. 1891	Mar. 8, 1892	Dec. 20, 1891	38
39				1896			39
40	a 70,000	July 1, 1902					40
41	a 70,000	July 1, 1902					41

a Limit of cost.

WOODEN STEAM VESSELS

	Name.	Built.			Condition or service June 30, 1902.	Rig.	
		When.	Where.	By whom.			
1	Fern.....	1871	New York, N. Y..	Delamater & Stack.	Naval militia, Washington, D. C.	T w o - masted schooner	1
2	Franklin	1855-1865	Kittery, Me.....	United States...	Receiving ship, Norfolk, Va.	Housed over.	2
3	Iroquois	1858	New York, N. Y..	United States...	Transferred to Marine-Hospital Service.	Bark.....	3
4	Marion	1871-1875	Kittery, Me.....	United States...	Naval militia, San Diego, Cal.	Bark	4
5	Nipsic	1873-1879	Washington, D. C.	United States...	Naval station receiving ship, Puget Sound.	Bark	5
6	Omaha	1867-1869	Philadelphia, Pa .	United States...	Transferred to Marine-Hospital Service.	Bark	6
7	Pensacola ...	1858-1862	Pensacola, Fla ...	United States...	Training ship, Yerba Buena Island, San Francisco, Cal.	D e c k house and drill masts.	7
8	Richmond...	1858	Norfolk, Va.....	United States...	Receiving ship, navy-yard, Norfolk, Va.	Ship.....	8
9	Wabash	1854	Philadelphia, Pa .	United States...	Receiving ship, Boston, Mass.	Housed over.	9
10	Yantic.....	1864	Philadelphia, Pa .	United States...	Naval militia, Michigan.	Bark	10

WOODEN SAILING VESSELS

	Name.	Built.			Condition or service June 30, 1902.	Rig.	
		When.	Where.	By whom.			
1	Constitution .	1797	Boston, Mass .	United States...	In ordinary, navy-yard, Boston, Mass.	Housed over..	1
2	Dale	1839	Philadelphia, Pa.	United States...	Naval militia, Baltimore, Md.	Housed over..	2
3	Independence.	1837	Boston, Mass .	United States...	Receiving ship, Mare Island, Cal.	Housed over..	3
4	New Hampshire.	1818	Kittery, Me...	United States...	Naval militia, New York, N. Y.	Housed over..	4
5	St. Louis	1828	Washington, D. C.	United States...	Naval militia, Philadelphia, Pa.	Housed over..	5

UNFIT FOR SEA SERVICE.

	Dimensions.			Displacement.	Tonnage.		Indicated horse-power.	Speed.	Batteries.		Coal capacity at 43 cubic feet per ton.	Complement.	
	Length between perpendiculars.	Breadth.	Mean draft.		Gross.	Net for Suez Canal.			Main.	Secondary.		Officers.	Men.
	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Kts.</i>				<i>Tons.</i>		
1	160 0	28 0	11 9½	840	542.48	.....	300 9	.....	.....	.....	80	5	45 1
2	265 9	54 3	24 3	5,170	3,172.37	.....	1,050 9	.....	2 3-pdr.	.....	.....	108	2
3	198 10	33 10	15 3	1,575	695.28	.....	1,202 10.7	.....	.....	.....	128	35	3
4	216 0	37 0	16 6	1,900	.....	.....	1,100 11.25	.....	.....	.....	135	18	190 4
5	185 0	35 0	14 3	1,375	.....	.....	839 10.7	.....	.....	.....	132	48	5
6	250 6	38 0	16 6	2,400	1,082.56	.....	953 11.3	.....	.....	.....	.....	.....	6
7	230 8	44 6	18 7	3,000	1,993.16	.....	.....	.....	1 4" R. F.	1 6-pdr. 1 3-pdr. 2 1-pdr. 1 Colt. 1 3" field.	285	96	7
8	225 0	42 6	17 4½	2,700	1,384.94	.....	692 9.5	.....	2 6-pdr. R. F. G..	.....	265	66	8
9	262 7	51 4	23 0	4,650	2,917.89	.....	950 9.15	.....	.....	.....	.....	116	9
10	180 0	30 0	12 2	900	.....	.....	310 8.30	.....	.....	.....	180	20	131 10

UNFIT FOR SEA SERVICE.

	Dimensions.			Displacement.	Gross tonnage.	Net tonnage.	Batteries.		
	Length between perpendiculars.	Breadth.	Mean draft.				Main.	Secondary.	
	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>			
1	175 0	45 0	20 0	2,200	.....	.....	.....	.....	1
2	117 7	33 10	14 9	675	.....	.....	.....	.....	2
3	189 0	51 6	21 6	3,270	1,891.26	.....	2 6-pdr.	.....	3
4	196 3	53 0	25 6	4,150	.....	.....	.....	.....	4
5	126 6	32 8	15 6	830	.....	.....	.....	.....	5

AUXILIARY

	Name.	Material.	Rig.	Built.			
				When.	Where.	By whom.	
1	Buffalo	Steel....	Topsail schooner.	1892	Newport News, Va..	Newport News S. B. & D. D. Co.	1
2	Dixie	Steel....	Topsail schooner.	1893	Newport News, Va..	Newport News S. B. & D. D. Co.	2
3	Panther	Iron	Brig	1889	Philadelphia, Pa ...	Wm. Cramp & Sons.....	3
4	Prairie	Iron	Brig	1890	Philadelphia, Pa ...	Wm. Cramp & Sons.....	4
5	Yankee.....	Iron	Brig	1892	Newport News, Va..	Newport News S. B. & D. D. Co.	5

	Name.	Type of engine.	Speed.	Indicated horse-power.	Bunker capacity.	
			<i>Knots.</i>		<i>Tons.</i>	
1	Buffalo	Single screw triple expansion	14.5	3,600	1,000	1
2	Dixie	Single screw triple expansion	16	3,800	1,371	2
3	Panther	Single screw triple expansion	13	.....	713	3
4	Prairie	{Single screw vertical inverted triple expansion.	14.5	3,800	1,376	4
5	Yankee.....	{Single screw vertical inverted triple expansion.	12.5	3,800	1,000	5

BUREAU OF CONSTRUCTION AND REPAIR.

CRUISERS.

Condition or service June 30, 1902.		Length. ^a	Breadth, extreme.	Mean draft.	Displacement.	Tonnage.		
						Gross.	Net for Suez Canal.	
		<i>Fl. in.</i>	<i>Fl. in.</i>	<i>Fl. in.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	
1	En route to Manila	391 6	48 2½	19 5	6,000	4,660	.....	1
2	Navy-yard, New York	391 6	48 2½	19 11	6,114	4,664.88	.....	2
3	Navy-yard, New York	312 1	40 7½	15 9	3,380	2,843	.....	3
4	Training service, landsmen	391 6	48 2½	20 7	6,530	4,522	.....	4
5	Navy-yard, League Island	391 6	48 2½	19 5	6,000	4,659	.....	5

Batteries.		Complement.		First commission in U. S. Navy.	
Main.	Secondary.	Officers.	Men.		
1 { 2 5" R. F. G. 4 4" R. F. G.	{ 6 6-pdr 2 1-pdr 4 Maxims, 37 mm. 2 Colts	20	677	July 18, 1898	1
2 { 8 5" R. F. G.	{ 4 6-pdr 4 1-pdr 2 Colts 1 3" field	14	621	Apr. 19, 1898	2
3 { 6 5" R. F. G. 2 4" R. F. G.	{ 6 3-pdr 1 Colt 1 3" field	31	482	Apr. 22, 1898	3
4 { 8 6" R. F. G.	{ 6 6-pdr 4 3-pdr 2 6 mm. Colts 4 1-pdr. ^b	24	689	Apr. 14, 1898	4
5 { 8 5" R. F. G.	{ 6 6-pdr 2 1-pdr 2 Colts	30	680	Apr. 14, 1898	5

^a Fore side stem to center rudder stock.
^b For use in subcaliber practice (unmounted).

CONVERTED

	Name.	Material.	Rig.	Built.			
				When.	Where.	By whom.	
1	Aileen	Steel.....	Schooner ..	1896	Chester, Pa	John Roach	1
2	Dorothea ...	Steel.....	Schooner ..	1897	Philadelphia, Pa	Wm. Cramp & Sons	2
3	Eagle.....	Steel.....	One mast ..	1890	Wilmington, Del	Harlan & Hollingsworth	3
4	Elfrida	Steel.....	Schooner ..	1899	Wilmington, Del	Harlan & Hollingsworth	4
5	Frolic	Steel.....	Schooner ..	1892	Cleveland, Ohio	Globe Iron Works	5
6	Gloucester..	Steel.....	Schooner ..	1891	Philadelphia, Pa	Neale & Levy	6
7	Hawk	Steel.....	One mast ..	1891	Paisley, Scotland	Fleming & Ferguson ...	7
8	Hist	Steel.....	Schooner ..	1895	Philadelphia, Pa	Wm. Cramp & Sons.....	8
9	Hornet	Steel.....	One mast ..	1890	Wilmington, Del	Harlan & Hollingsworth	9
10	Huntress ...	Composite	Schooner ..	1895	Nyack-on-Hudson	Chas. L. Seabury & Co..	10
11	Inca	Wood.....	Schooner ..	1898	South Boston, Mass....	George Lawley & Sons .	11
12	Mayflower..	Steel.....	Schooner ..	1896	Clydebank, Scotland .	J. and G. Thompson....	12
13	Oneida	Steel.....	Schooner ..	1896	Bath, Me.....	Bath Iron Works	13
14	Restless	Iron	One mast ..	1887	Chester, Pa	Houston & Woodbridge.	14
15	Scorpion....	Steel.....	Schooner ..	1896	South Brooklyn, N. Y.	John N. Robins	15
16	Shearwater..	Steel.....	Schooner ..	1887	East Boston, Mass	Atlantic Works.....	16
17	Siren	Steel.....	One mast ..	1897	Leith, Scotland	Hawthorne & Co	17
18	Stranger....	Iron	One mast ..	1880	Philadelphia, Pa	Wm. Cramp & Sons	18
19	Sylph.....	Steel.....	Schooner ..	1898	Chester, Pa	John Roach	19
20	Sylvia	Iron	Schooner ..	1882	Glasgow, Scotland	A. Stephen & Sons.....	20
21	Vixen	Steel.....	Schooner ..	1896	Elizabethport, N. J ...	Lewis Nixon	21
22	Wasp	Steel.....	Schooner ..	1898	Philadelphia, Pa	Wm. Cramp & Sons.....	22
23	Yankton ...	Steel.....	Schooner ..	1893	Leith, Scotland	Ramage & Ferguson ...	23

BUREAU OF CONSTRUCTION AND REPAIR.

YACHTS.

	Condition or service June 30, 1902.	Length.	Breadth.	Mean draft.	
		<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	
1	Naval militia, New York	120 0	20 0	8 0	1
2	Naval militia, Illinois	182 4	23 4½	11 5½	2
3	Navy-yard, Portsmouth	155 6	24 0	11 6	3
4	Naval militia, New Jersey	102 0	18 0	9 6	4
5	Asiatic Station	a 165 0	25 0	10 4	5
6	Naval Academy, Annapolis, Md	a 204 0	27 2	12 0	6
7	Naval militia, Ohio	a 145 0	22 0	11 6	7
8	Training station, Newport, R. I.	174 0	23 0	9 10	8
9	Naval militia, North Carolina	a 160 0	24 0	11 0	9
10	Naval militia, New Jersey	a 97 0	16 0	7 3	10
11	Naval militia, Massachusetts	96 6	16 3	7 0	11
12	Special service, Porto Rico	a 273 0	36 0	17 2½	12
13	Naval militia, Washington, D. C.	a 110 11	18 6	7 6	13
14	Navy-yard, Norfolk	a 113 0	16 0	6 6	14
15	North Atlantic Station	210 6	28 1	11 6	15
16	Naval militia, Pennsylvania	a 108 0	18 0	7 3½	16
17	Tender to Franklin	a 123 0	19 2	11 0	17
18	Naval militia, Louisiana	a 173 6	23 9½	10 6	18
19	Special service	a 123 8	20 0	7 6	19
20	Naval militia, Maryland	a 130 0	18 6	10 0	20
21	Navy-yard, Portsmouth	a 182 3	28 0	12 8	21
22	Training station, Port Royal	a 180 0	23 0	12 0	22
23	Navy-yard, Portsmouth	a 185 0	27 6	13 10	23

a On water line.

CONVERTED

	Name.	Displace- ment.	Tonnage.		Type of engine.	Speed.	
			Gross.	Net for Suez Canal.			
		<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>		<i>Knots.</i>	
1	Aileen	192	151.33	.....	Single screw vertical triple expansion.	14	1
2	Dorothea	594	433.18	.....	Single screw vertical triple expansion.	15	2
3	Eagle	434	364.75	.....	{ Single screw vertical inverted triple expansion.	15.5	3
4	Elfrida	^a 173	122.64	.....			
5	Frolic	607	408.04	224.524	{ Single screw vertical inverted triple expansion.	11	5
6	Gloucester....	786	561	.....	{ Single screw vertical inverted triple expansion.		
7	Hawk	375	270	.....	Single screw quadruple expansion....	14.5	7
8	Hist	472	312	.....	Single screw vertical compound	14.5	8
9	Hornet	425	301.89	.....	{ Single screw vertical inverted triple expansion.	15	9
10	Huntress	81.76	85	.....			
11	Inca	^a 120	94	.....	Single screw triple expansion.....	14	11
12	Mayflower....	2,690	1,800	.....	Twin screw triple expansion.....	16.8	12
13	Onelda	150	118.90	.....	{ Single screw vertical inverted triple expansion.	12	13
14	Restless	158	104.87	.....			
15	Scorpion.. ...	850	627.60	.....	{ Twin screw vertical inverted triple expansion.	17.85	15
16	Shearwater...	122	109.01	.....			
17	Siren	^a 315	102	.....	Single screw vertical triple expansion.	13	17
18	Stranger	^a 546	247.40	.....	Single screw compound	14	18
19	Sylph	152	172	.....	Single screw vertical triple expansion.	15	19
20	Sylvia	^a 302	136.08	.....	Single screw compound	9	20
21	Vixen	806	545.59	.....	Single screw vertical triple expansion.	16	21
22	Wasp	630	380	.....	Single screw inverted triple expansion.	16.5	22
23	Yankton	^a 975	541.45		Single screw vertical triple expansion.	14	23

^a Estimated.

BUREAU OF CONSTRUCTION AND REPAIR.

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YACHTS—Continued.

	Indicated horse- power.	Bunker capacity, 43 cubic feet to ton.	Battery.	Complement.		First commis- sion in United States Navy.	
				Officers.	Men.		
1	500	<i>Tons.</i> 45	Battery removed	3	30	May 14, 1898	1
2	1,558	78	{ 6 6-pdr.	6	64	June 1, 1898	2
3	b 850	65	{ 4 Colts auto.				
4	b 200	23	{ 2 6-pdr.	4	48	Mar. 26, 1898	3
5	550	81	{ 2 Colts				
6	2,000	120	Battery removed	4	15	June 30, 1898	4
7	1,000	70	{ 4 3-pdr.				
8	b 500	60	{ 2 Colts	7	65	July 6, 1898	5
9	b 800	65	{ 4 6-pdr.				
10	.....	17	{ 4 3-pdr.	9	13	May 20, 1899	6
11	400	25	{ 2 Colts				
12	4,700	525	Battery removed	4	46	Apr. 5, 1898	7
13	350	20	3 3-pdr.	6	58	May 13, 1898	8
14	b 500	12.34	Battery removed	4	51	Apr. 12, 1898	9
15	2,800	140	Battery removed	4	16	July 1, 1898	10
16	.....	12	Battery removed	3	18	Aug. 1, 1898	11
17	.....	45	{ 10 6-pdr.	8	160	.....	12
18	.....	50	{ 2 1-pdr.				
19	550	47	{ 2 Colts auto.	2	22	Apr. 30, 1898	13
20	.....	60	Battery removed				
21	1,250	190	Battery, 2 Colts.	3	30	May 14, 1898	14
22	1,800	79	{ 6 6-pdr.	8	83	Apr. 11, 1898	15
23	750	170	{ 2 4-inch R. F.				
			{ 4 6-pdr. ....	.....	4	.....	16
			Battery removed				
			{ 4 1-pdr.	5	37	June 24, 1898	17
			{ 1 Colt.				
			Battery removed	8	49	June 30, 1898	18
			1 6-pdr.	3	25	.....	19
			Battery removed	5	31	June 29, 1898	20
			{ 4 6-pdr.	6	74	Apr. 11, 1898	21
			{ 2 1-pdr.				
			{ 2 Colts	4	47	Apr. 11, 1898	22
			{ 4 6-pdr.				
			{ 2 Colts	8	79	May 16, 1898	23
			{ 1 3-pdr.				

b Nominal horsepower.

	Name.	Material.	Rig.	Built.			
				When.	Where.	By whom.	
1	Abarenda ..	Steel....	Schooner ...	1892	Newcastle, England....	Edwards S. B. Co.....	1
2	Ajax	Steel....	Schooner ...	1890	Glasgow, Scotland	D. & W. Henderson & Co.	2
3	Alexander..	Steel....	Schooner ...	1894	Stockton-on-Tees.....	Richardson, Duck & Co.	3
4	Brutus.....	Iron	2 pole masts.	1894	South Shields, England.	J. Readhead & Sons..	4
5	Cæsar.....	Steel....	Schooner ...	1896	Stockton-on-Tees.....	Ropner & Son	5
6	Hannibal...	Steel....	Schooner ...	1898	Sunderland, England ..	J. Blumer & Co.....	6
7	Justin	Steel....	Schooner ...	1891	Middleboro - on - Tees, England.	R. Dixon & Co	7
8	Lebanon ...	Steel....	Schooner ...	1894	Philadelphia, Pa	Wm. Cramp & Sons ..	8
9	Leonidas ...	Steel....	Schooner ...	1898	Sunderland, England ..	S. P. Austin & Son, Limited.	9
10	Marcellus ..	Iron	Schooner ...	1879	Sunderland, England ..	Mounsey & Foster....	10
11	Nanshan ...	Steel....	2 pole masts.	1896	Grangemouth, Scotland	Grangemouth Dock-yard Co.	11
12	Nero.....	Steel....	Schooner ...	1895	Sunderland, England ..	J. L. Thompson & Son, Limited.	12
13	Pompey	Steel....	Schooner ...	1897	Sunderland, England ..	S. P. Austin & Son, Limited.	13
14	Saturn	Iron	Schooner ...	1890	Wilmington, Del	Harlan & Hollingsworth.	14
15	Southery ...	Steel....	Schooner ...	1889	Sunderland, England ..	R. Thompson Sons & Co.	15
16	Sterling	Iron	Schooner ...	1881	Port Glasgow, Scotland.	Duncan & Co.....	16

	Name.	Speed loaded.	Speed light.	Displacement.	Tonnage.		Type of engine.	
					Gross.	Net for Suez Canal.		
1	Abarenda ..	<i>Knots.</i> 9	<i>Knots.</i> 9.5	<i>Tons.</i> 4,670	<i>Tons.</i> 3,125	<i>Tons.</i>	Single screw vertical triple expansion.	1
2	Ajax	12	11	7,500	4,534	.....	Single screw vertical triple expansion.	2
3	Alexander ..	8.75	10	6,181	3,250	.....	Single screw vertical triple expansion.	3
4	Brutus.....	10	.....	6,600	3,077	.....	Single screw vertical triple expansion.	4
5	Cæsar	10	11	5,016	2,738	.....	Single screw vertical triple expansion.	5
6	Hannibal...	9	10	4,291	1,785	.....	Single screw vertical triple expansion.	6
7	Justin	8.3	10.9	3,300	2,206	.....	Single screw vertical triple expansion.	7
8	Lebanon ...	10	12.5	.....	1,400	.....	Single screw vertical triple expansion.	8
9	Leonidas ...	8.5	9.5	4,242	1,802	.....	Single screw triple expansion	9
10	Marcellus ..	11	.....	.....	1,960	.....	Single screw vertical compound.....	10
11	Nanshan ...	10.5	11	4,950	2,200	.....	Single screw vertical triple expansion.	11
12	Nero.....	9	.....	.....	2,925	.....	Single screw vertical triple expansion.	12
13	Pompey	10.5	13	3,085	1,285	.....	Single screw triple expansion	13
14	Saturn.....	11	.....	6,220	2,268	.....	Single screw triple expansion	14
15	Southery ...	9	10.5	3,100	2,068	.....	Single screw vertical triple expansion.	15
16	Sterling	11	11	5,663	2,016	.....	Single screw vertical triple expansion.	16

LIERS.

	Condition or service June 30, 1902.	Length over all.	Length between perpen- diculars.	Breadth.	Depth of hold.	Extreme draft loaded.	Extreme draft light.	
		<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	<i>Ft. in.</i>	
1	En route to navy-yard, Norfolk..	320 0	314 0	42 0	28 6	23 6	11 3	1
2	Collier service	387 0	375 0	46 2	30 0	25 0	16 0	2
3	Collier service	342 3 $\frac{1}{2}$	330 0	43 0	29 0	23 0	12 0	3
4	Collier service	329 0	321 5	41 5	21 9	23 6	14 7	4
5	Collier service	322 0	310 0	44 0	21 0	19 6	7 2	5
6	Collier service	275 0	264 5	39 3	20 0	18 6	12 0	6
7	Asiatic Station.....		^a 277 0	39 0	23 0	21 6	10 5	7
8	Collier service	258 0	249 0	37 6	22 0	19 0	7 6	8
9	Collier service	264 3	251 6	39 3	17 2	19 7	14 2	9
10	Navy-yard, Norfolk.....	295 3	^a 282 6	35 0 $\frac{1}{2}$	24 2	22 5 $\frac{1}{2}$	12 3 $\frac{1}{2}$	10
11	Asiatic Station.....	300 0	287 0	39 0	24 0	21 3	11 0	11
12	Collier service	320 0	312 0	41 0	20 6	22 9	10 9	12
13	Asiatic Station.....	245 0	234 0	33 6	15 6	16 10	9 10	13
14	Asiatic Station.....	296 0	281 0	40 0	26 2	22 8	15 6	14
15	Prison ship, Boston	302 9	288 0	38 9 $\frac{1}{2}$	18 3 $\frac{1}{2}$	21 6	10 6	15
16	Collier service	284 0	275 0	37 0	23 6	22 8	11 9	16

	Indicated horse- power	Bunker capacity.	Cargo capacity for coal.	Battery.	Complement.		First commis- sion in United States Navy.	
					Officers.	Men.		
1	1,050	<i>Tons.</i> 712	<i>Tons.</i> 3,843	4 3-pdr. and 4 Colts	9	87	May 20, 1898	1
2	3,000	500	4,550	1 6-pdr	10	98	May 21, 1898	2
3	1,026	1,000	4,200	1 6-pdr	8	60	June 1, 1898	3
4	1,200	800	4,500	1 stand, 6-pdr. or 3-pdr.	9	61	May 27, 1898	4
5	1,500	361	3,740	1 6-pdr	6	48	May 13, 1898	5
6	1,100	497	2,203	1 6-pdr	8	42	June 7, 1898	6
7	.....	167	2,900	1 6-pdr	6	47	Apr. 27, 1898	7
8	.....	250	1,800	.....	5	53	Apr. 16, 1898	8
9	1,100	468	2,200	1 6-pdr	7	45	May 21, 1898	9
10	1,200	210	2,400	.....	6	62	.....	10
11	1,400	400	2,900	.....	7	44	.....	11
12	1,000	300	3,500	1 6-pdr	9	71	June 8, 1898	12
13	.....	230	1,700	1 6-pdr	5	38	May 26, 1898	13
14	1,500	335	2,400	1 6-pdr	7	67	Apr. 11, 1898	14
15	.....	380	3,000	1 6-pdr	6	53	Apr. 30, 1898	15
16	^b 926	450	2,400	1 6-pdr	8	52	Apr. 16, 1898	16

^a Registered length.^b Estimated.

HOSPITAL

	Name.	Material.	Type.	Rig.	Built.			
					When.	Where.	By whom.	
1	Arethusa ...	Steel..	Tanksteamer.	.....	1893	Stockton.....	Craig, Taylor & Co.	1
2	Celtic.....	Steel..	Refrigerator ship.	Schooner ...	1891	Belfast, Ireland.	Workman, Clark & Co., Limited.	2
3	Culgoa	Steel..	Refrigerator ship.	Schooner ...	1889	Sunderland, Eng-land.	J. L. Thompson & Son.	3
4	Glacier.....	Steel..	Refrigerator ship.	Schooner ...	1891	Sunderland, Eng-land.	J. L. Thompson & Son.	4
5	Iris	Iron ..	Distillingship	Brigantine .	1885	Newcastle, Eng-land.	A. Leslie & Co...	5
6	Manila ^a	Iron ..	Transport	Schooner ...	1881	Leith, Scotland.	.....	6
7	Peoria	Steel..	Pilotboat converted into auxiliary gunboat.	Schooner ...	1897	Philadelphia, Pa.	Neafie & Levy...	7
8	Rainbow ...	Steel..	Station and distilling ship.	Schooner ...	1890	Sunderland, Eng-land.	James Laing	8
9	Solace	Steel..	Hospital ship.	Schooner ...	1896	Newport News, Va.	Newport News S. B. & D. D. Co.	9
10	Supply	Iron ..	Station ship ..	Schooner ...	1873	Philadelphia, Pa.	Wm. Cramp & Sons.	10
11	Zafiro.....	Steel..	Supply ship ..	Schooner ...	1884	Aberdeen, Scot-land.	Hall, Russell & Co.	11

	Name.	Dis- place- ment.	Max- imum draft, ready for sea, bunk- ers full.	Tons per inch, nor- mal draft.	Tonnage.		Type of engine and boilers.	Speed.	
					Gross.	Net, for Suez Canal.			
		<i>Tons.</i>			<i>Tons.</i>	<i>Tons.</i>		<i>Knots.</i>	
1	Arethusa ..	^b 6,200	.....	.....	3,319	.....	.....	.....	1
2	Celtic.....	8,000	24.9	30	3,738	.....	Single screw triple expansion; Scotch.	10.5	2
3	Culgoa ...	6,950	24.6	26.5	3,325	.....	Single screw triple expansion..	13.5	3
4	Glacier ...	^b 7,000	.....	.....	4,154	.....	Single screw triple expansion..	12.5	4
5	Iris	^b 6,100	24	23.3	2,714.02	1,725.71	Single screw compound verti- cal; Scotch.	10	5
6	Manila ^a ..	1,750	13.6	10	.....	.....	{Single screw two-cylinder com- pound; Scotch.	} 10 to 11	6
7	Peoria	487.5	.....	.....	335	.....	Vertical compound.....		7
8	Rainbow ..	4,360	17.8	26.5	3,444.8	2,253.54	{Single screw vertical triple ex- pansion.	} 12	8
9	Solace	5,700	.....	.....	3,801	.....	Single screw vertical inverted triple expansion.		9
10	Supply ...	4,460	.....	25	3,341	.....	{Single screw inverted triple expansion.	} 9.66	10
11	Zafiro.....	1,200	15.6	14	1,062	.....	Single screw compound; Scotch.		11

^a Captured during war with Spain, on May 1, 1898.^b Estimated.

BUREAU OF CONSTRUCTION AND REPAIR.

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AND SUPPLY SHIPS.

Condition or service June 30, 1902.		Length.	Breadth.	Draft.	
		<i>Ft.</i> <i>in.</i>	<i>Ft.</i> <i>in.</i>	<i>Ft.</i> <i>in.</i>	
1	Asiatic station	332 0	42 2	18 8	1
2	Asiatic station	^a 371 4	44 0	^b 24 9	2
3	Repairing, navy-yard, Boston.....	334 4½	43 0	18 0	3
4	Asiatic station (refrigerating and serving out frozen meat and ice).	353 0	46 1½	25 0	4
5	Asiatic station	^a 304 0	39 0	24 0	5
6	Navy-yard, Mare Island	209 3	31 2	13 0	6
7	Tender to Amphitrite	^a 131 0	25 0	10 6	7
8	Asiatic station	326 9	41 1	16 6	8
9	Transport service to Manila.....	361 2	44 0	22 0	9
10	Navy-yard, New York.....	342 7	43 0	20 0	10
11	Asiatic station	213 8½	31 9½	14 6	11

	Indicated horse-power.	Normal coal supply.	Bunker capacity.	Steaming radius at 10 knots per hour.	Battery.	Complement.		Date first commission in United States Navy.	
						Officers.	Men.		
1		<i>Tons.</i>	<i>Tons.</i>		1 6-pdr.....	5	79		1
2	1,690	820	1,170	6,503	2 6-pdr. Maxim	9	107	May 25, 1898	2
3	2,350	900	963	8,880	.....	10	121	Dec. 3, 1898	3
4	1,750	.....	917	5,760	.....	8	108	July 5, 1898	4
5	1,320	340	340	3,100	.....	10	102	Apr. 1, 1898	5
6	750	200	186	2,636	{ 2 4.7", 2 6mm Colts auto., 2 1-pdr., and 2 3-pdr. 2 6-pdr.....	10	92	July 4, 1898	6
7	.....	.....	68	.....	{ 4 3-pdr. H..... 2 37mm H..... 1 Colts.....	6	46	May 15, 1898	7
8	1,800	698	1,139	.....	{ 6 6-pdr. R. F..... 6 1-pdr. R. F..... 2 Colt.....	3	52	July 18, 1898	8
9	3,200	.....	1,000	.....	3 6-pdr.....	12	190	Apr. 14, 1898	9
10	1,069	650	1,029	.....	{ 6 6-pdr. R. F..... 4 1-pdr. R. F..... 2 Colts.....	10	104	.....	10
11	850	175	175	2,880	2 37mm rev. cannon	8	37	Apr. 10, 1898	11

^a On water line.^b Extreme.

SUMMARY OF VESSELS IN THE UNITED STATES NAVY.

VESSELS FIT FOR SERVICE, INCLUDING THOSE UNDER REPAIR.

FIRST-CLASS BATTLE SHIPS	9
SECOND-CLASS BATTLE SHIP.....	1
ARMORED CRUISERS	2
ARMORED RAM	1
DOUBLE-TURRET MONITORS	6
PROTECTED CRUISERS	14
UNPROTECTED CRUISERS	3
GUNBOATS.....	12
LIGHT-DRAFT GUNBOATS	3
COMPOSITE GUNBOATS	6
TRAINING SHIP (NAVAL ACADEMY), SHEATHED.....	1
SPECIAL CLASS (DOLPHIN-VESUVIUS)	2
GUNBOATS UNDER 500 TONS	21
TORPEDO-BOAT DESTROYERS	3
STEEL TORPEDO BOATS	28
SUBMARINE TORPEDO BOAT.....	1
WOODEN TORPEDO BOAT	1
IRON CRUISING VESSELS, STEAM	5
WOODEN CRUISING VESSELS, STEAM	6
WOODEN SAILING VESSELS	4
TUGS.....	39
AUXILIARY CRUISERS	5
CONVERTED YACHTS	23
COLLIERS.....	16
SUPPLY SHIPS AND HOSPITAL SHIP	11
TOTAL	223

VESSELS UNDER CONSTRUCTION OR AUTHORIZED.

FIRST-CLASS BATTLE SHIPS.....	10
ARMORED CRUISERS	8
STEEL SINGLE-TURRET MONITORS	4
PROTECTED CRUISERS	9
GUNBOAT FOR GREAT LAKES (NOT BEGUN)	1
COMPOSITE GUNBOATS	2
TORPEDO-BOAT DESTROYERS	13
STEEL TORPEDO BOATS	7
SUBMARINE TORPEDO BOATS.....	7
TUGS.....	2
TOTAL	63

VESSELS UNFIT FOR SEA SERVICE.

IRON SINGLE-TURRET MONITORS	5
IRON CRUISING VESSEL, STEAM.....	1
WOODEN CRUISING VESSELS, STEAM	10
WOODEN SAILING VESSELS	8
TOTAL	24
GRAND TOTAL.....	310

STANDARD BOATS IN THE UNITED STATES NAVY.

Type of boat.	Length, extreme.	Breadth, extreme.	Depth from top of gunwale to lower edge of rabbet.	Weight.		Maximum number of men boat will carry.	Weight of provisions and water.	Corresponding free-board.	Sail area.	Area of load water plane, service condition.
				Hull.	Total, including outfit.					
	<i>Ft. In.</i>	<i>Ft. In.</i>	<i>Ft. In.</i>	<i>Lbs.</i>	<i>Lbs.</i>		<i>Lbs.</i>	<i>Ft. In.</i>	<i>Sq. ft.</i>	<i>Sq. ft.</i>
Steam cutters	50 0	10 0	5 3	13,591	31,398	75	750	2 9½	307.00	312
	40 0	9 0	4 7½	8,064	18,720	60	600	1 9½	372.40	212.8
	36 0	8 9	4 6	7,037	16,001	53	530	1 8½	318.58	182.6
	33 0	8 7	4 5	5,510	13,476	48	480	1 8¼	301.90	172.5
	30 0	8 0	4 1½	4,390	10,901	40	400	1 8¼	253.75	145
Launches	28 0	7 8	4 0½	4,007	9,470	35	350	1 6¼	218.82	125
	36 0	9 9½	3 9	4,550	7,073½	78	780	2 0½	559.87	220
	33 0	9 3¼	3 8	3,591	5,910½	64	640	1 11½	507.00	168.5
	30 0	8 6	3 5	2,705	4,797½	50	500	1 9½	456.00	152.75
	28 0	7 5	2 8	2,150	3,800	40	400	1 1½	290.00	143
Cutters.....	30 0	8 0	2 10	2,262	3,384½	45	450	1 4	322.00	126
	28 0	7 5	2 8	1,952	3,006½	40	400	1 2	290.00	114.75
	26 0	6 11	2 6	1,560	2,526½	30	300	1 0½	240.00	94.5
	24 0	6 6	2 6	1,142	2,059½	28	280	1 0	207.00	91
	20 0	5 3	2 1	453	1,092½	12	120	1 1½	142.80	66.5
Barge	30 0	6 11	2 8	1,712	2,960	37	370	1 0	293.00	117.5
Whaleboats	30 0	6 10	2 5	1,767	2,722½	28	280	1 1½	278.00	111.5
	29 0	6 8	2 5	1,499	2,441½	25	250	1 1	260.00	104
	28 0	6 6	2 5	1,346	2,268½	23	230	1 1½	240.00	96
	24 0	5 11½	2 2½	1,050	1,888	15	150	1 0	173.65	77
	20 0	5 3	2 1	484	1,090½	10	100	1 1½	137.00	58
Gig whaleboats	30 0	6 2	2 5	1,365	2,391½	20	200	1 2½	236.00	94.75
	28 0	6 0	2 5	1,140	2,139½	16	160	1 3	211.00	85
Dingeys.....	20 0	5 6	2 2	710	1,279½	12	120	1 2	134.40	59.7
	18 0	5 4	2 1	612	1,150½	10	100	1 0½	126.32	56.14
Dingeys (special) ..	18 0	5 3¼	2 1	400	900½	10	100	1 1	126.32	.....
	16 0	4 6	1 10	324	684½	5	50	0 11½	88.40	39.25
	14 0	4 4	1 8	250	548½	4	40	0 8½	71.00	34.5
Balsas.....	18 0	6 2	1 9½	700	981	12	120	.....	56.61	.....
	16 0	5 6½	1 7½	575	840	9	90	.....	47.50	.....
Punts	12 0	4 2	1 8	405	433	.....	.....	.....	.....	.....
	10 0	3 7	1 5½	341	369	.....	.....	.....	.....	.....

Very respectfully,

F. T. BOWLES,
Chief Constructor, U. S. Navy,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT

OF THE

CHIEF OF BUREAU OF STEAM ENGINEERING.

DEPARTMENT OF THE NAVY,
BUREAU OF STEAM ENGINEERING,
Washington, D. C., October 1, 1902.

SIR: In obedience to your order of July 3, 1902, the following annual report of the operations of this Bureau during the fiscal year ending June 30, 1902, together with the estimates of the Bureau for the fiscal year ending June 30, 1904, is respectfully submitted:

Appropriations, steam machinery, 1901-2.

Amount appropriated for fiscal year ending June 30, 1902, act approved March 3, 1901.....	\$3, 245, 000. 00
Labor in navy-yards and stations in repair of steam machinery, boilers, etc., of naval vessels fitting for sea service, preservation and repair of tools, handling and preservation of materials, stores, etc.....	\$1, 569, 365. 81
Purchase of materials, stores, machine tools, freight, and incidental expenses.....	959, 819. 70
Payments for repairs, materials, freight, and incidental expenses for ships on foreign stations.....	181, 516. 88
Total.....	2, 710, 702. 39
Less refunds by transfers in adjustment of appropriations.....	115, 087. 92
Total expenditure.....	2, 595, 614. 47
Balance in Treasury September 1, a portion being required to pay outstanding obligations.....	649, 385. 53

PORTSMOUTH, N. H., NAVY-YARD.

The Bureau regrets that it can not report that the construction of an entire new collection of buildings for its purposes has been commenced at this yard, for those now used by it are entirely unsuited for their purposes, having been built before most of the modern appliances for handling work, such as traveling cranes, were even thought of, besides being too small and improperly arranged and located. More than this: though part of the machine shop is now overloaded to an almost dangerous degree, additional tools are required, and floor space for them, to complete work already ordered within the specified time.

Appropriations have been made for the rebuilding of the machine shop, for an administration building, and for a power house and chimney. The further amounts necessary to erect foundry, boiler and

copper shops, smithery and pattern shops, according to plans already submitted, should be at once made available.

Last year the Bureau submitted an estimate of \$100,000 to purchase power tools for this yard and place the shops in condition to perform work expeditiously and economically, and this is renewed with the hope that it, and appropriations for new buildings, will be passed.

Four 20-inch I-beams, each with combined hoist and traveler, have been fitted in the lower machine shop over the heaviest tools and have proved of great value as a makeshift for a traveling crane, working as they do in connection with a railroad track, also installed during the last year in the same shop. To lead this track into the shop a large door was cut through the north end and the light and ventilation greatly improved thereby.

Very extensive repairs, amounting almost to rebuilding, have been made to the machinery of the *Raleigh* and *Detroit*, and both vessels are expected to be ready for the winter maneuvers. Water tube boilers were fitted in the former vessel.

Repairs, some quite extensive, have been made to the machinery of the following vessels, or stores and outfits prepared for them: *Bagley*, *Barney*, *Biddle*, *Eagle*, *Vixen*, *Marietta*, *Yankton*, *Nezinscot*, *Sioux*, and *Baltimore*.

The machinery has been removed from the *Reina Mercedes* with a view to making her a sailing ship.

Thirty engines and spare parts have been built for steam cutters; nine of those have been installed in the cutters. Forty-seven additional engines for cutters are in various stages of completion, and nine cutters are having machinery fitted.

The various steam generators have been examined and repaired as required.

Much work has been done for other yard departments, particularly in the foundry, for the bureaus of Yards and Docks, Construction and Repair, and Equipment.

The following additional tools have been obtained during the last year: One Becker Brainard vertical milling machine No. 6; one copper pipe bending machine from Norfolk Navy-Yard; one Landis 10 by 30 inch grinding machine; four 10-ton Reading, multiple geared, combined hoists and travelers; one 2,000-pound steam hammer; one 3-inch bolt forging machine; one single surface planing machine; one improved jointing and facing machine; one No. 3 bipolar motor; six bench wood trimmers.

All of the foregoing are installed in place and in successful operation excepting the steam hammer and bolt-forging machine, which, on account of lack of space, are awaiting the vacating of the blacksmith's shop by the Department of Construction and Repair. It is hoped that these tools may soon be in position and in operation, as they are greatly needed.

The following extract from report of the head of department of Steam Engineering, and in which this Bureau heartily concurs, is respectfully submitted for the consideration of the Department:

In handling and dealing generally with the many bulky heavy articles to be found in a navy-yard, it inevitably happens that the head of the department to which they appertain is finally called upon to decide in regard to their location and use. In regard to smaller ones of complicated forms questions are continually arising which can only be answered by an expert, and so they, too, fall into his custody as soon as any difficulties arise in regard to them. There are many objects, probably most of

organization is soon destroyed, and in such a climate the tools deteriorate simply from want of use.

The expenditures at this station during the last year amounted to \$9,841.41.

NAVY-YARD, PENSACOLA, FLA.

At this yard the Bureau has only a small machine shop with some few tools, mostly antiquated, and could only make small repairs to the machinery of a naval vessel even in case of emergency.

During the year the various power tools have been overhauled and such repairs made as were possible, with a view to rendering them more efficient. Some that had been considered beyond repair for many years, and only an incumbrance in the shop, were rebuilt and made as serviceable as tools of such design can be.

The interior of the copper shop was entirely rearranged and the furnaces and forges rebuilt and improved.

The boiler shop and smithery forges and flange fires were entirely rebuilt and put in good condition.

Repairs have been made to the machinery of the following vessels, or stores and outfits prepared for them: *Accomac*, *Osceola*, *Sebago*, yard cutters, light-house tender *Mangrove*.

A new and properly arranged building should be erected for a machine shop and the present one utilized for a foundry. The remaining building should be converted into a smithery, boiler, and copper shop, and the yard would then, so far as this Bureau is concerned, be in the condition its importance warrants.

The expenditures during the last fiscal year amounted to \$13,766.15.

NAVAL STATION, ALGIERS, LA.

The north wing of Steam Engineering building (No. 6), the only portion contracted for, is now under construction and the foundations practically completed; the floor piles were driven, but no iron work, brick, or other material had been received at last report.

The contract for this work was made March 31, 1902, and it should have been completed on November 30 next, but there is no certainty that the building will be completed on time.

The balance of this building should be estimated for and completed as soon as possible.

There is also an appropriation available for power tools, and they will be obtained and installed as soon as the building is in readiness for them.

No work was done here under its cognizance during the past year.

MARE ISLAND NAVY-YARD.

Work has been commenced on a new machine shop for this Bureau, but no appropriations have been made for any of the other shops, equally needed, and for which Congress has already appropriated the funds necessary to equip them (when built) with power tools.

The present shops are inconveniently and improperly located, being at a great distance from the dry docks, and are of such designs that many essentials of an economical shop, like traveling cranes, can not be installed.

The present shops are desired for use by another Bureau, but can not be so utilized till new ones have been supplied for Steam Engineering. Delay in appropriations will not, therefore, save money, but will seriously impair the efficiency of two of the most important departments of the yard.

Work during the year has been done on the following vessels, or stores and outfits prepared for them: *Adams, Alert, Active, Boston, Bennington, Concord, Davis, Fox, Farragut, Marblehead, Mohican, Petrel, Philadelphia, Ranger, Solace, Vigilant, Wheeling.*

A number of steam-cutter engines have been built and machinery installed in a number of cutters.

A new engine was constructed and shipped to the Philippines for one of the small gunboats; nine boilers were also constructed and shipped to the same place for use in small vessels. Three additional boilers are now under construction.

Two boilers have been constructed for the Construction and Repair sawmill.

New boiler was made and machinery generally overhauled in revenue steamer *Perry*.

A boiler was constructed for the army engineers' tug.

Extensive repairs were made to the machinery of the army transports *Crook* and *Logan*.

The plant of the department has been maintained in as efficient a condition as possible. No improvements have been made in the buildings, and, in hopes that new and more suitable ones will be furnished in the near future, none are recommended.

The following power tools have been added during the past year: Boiler shop, one 6-foot radial drill, one universal cutter and tool grinder, one 24-inch vertical drill; smithery, one Ajax bolt and rivet machine; pattern shop, one Crane pattern and core box machine.

The expenditures during the past fiscal year at this yard amounted to \$491,450.27.

PUGET SOUND NAVY-YARD.

Appropriations have been made for foundry and coppersmith shop, boiler and blacksmith shop at this yard, which leaves only pattern shop, power house, and administration building to be provided for. It is probable, however, that the demands made upon it will soon prove that the present machine shop is entirely too small and that it will require considerable additions made to it.

The following improvements have been made in the plant during the last year:

The flooring of the machine shop has been completed, with the exception of spaces around columns for runway of overhead crane, which is left open to receive the columns.

The machine shop has also been provided with railroad track and turntable to connect with foundry, when erected.

A "lean-back" addition (16 feet by 48 feet 6 inches) has been added to machine shop as an extension to tool room and storage space for articles kept on hand for current issue and depository for stores drawn in excess to be credited back to the proper account.

An addition (16 by 20 feet) to the machine-shop building has also been erected to accommodate the air compressor.

Temporary shed, partially of wood and partially of galvanized iron, has been erected (40 by 150 feet) for use as an iron foundry, blacksmith and copper shop, in which a large amount of work has been accomplished, but the floor space is very limited.

A storage shed (30 by 182 feet) for cement, lime, coal, coke, and other stores requiring preservation from the weather has been erected; one end of which answers as a carpenters' shop.

A temporary office building (20 by 30 feet) has been erected, but will be too small for future requirements, when it will make a building for testing machines.

A lavatory building has also been erected.

Commenced erection of overhead crane in machine shop.

During the year repairs have been made to the following vessels, or stores and outfits prepared for them: *Oregon*, very general overhauling and rearrangement of much of the auxiliary machinery; *Iowa*; *Wisconsin*, some heavy boiler work and other repairs; *Nipsic*, *Alert*, *Rowan*, *Goldsborough*, *Pawtucket*; *Egbert* (army transport); *Bear* (revenue cutter); *Wilson* (army tug); yard cutters.

Machinery was fitted in a number of steam cutters.

Considerable work was also done for other departments in the way of repairs to machinery, etc.

The following power tools have been installed during the year: Bolt-pointing machine, nut-facing machine, nut-milling machine, two brass lathes, two turret lathes, one tool-room lathe, one pattern maker's lathe, one cutting-off saw for metal, universal cutter and reamer grinder, one double emery grinder, two buffing wheels, one stropping wheel, one gauge-testing apparatus, one magnetic iron and brass separator, two grindstones, two large punching and shearing machines, one buzz planer, one circular saw, one band saw; one 30-horsepower electric motor, connected as motor or dynamo to furnish current for electric crane or drive machinery in case of derangement to main-shop engine, as may be desired; a reserve cistern was also constructed to supply feed water in case of repairs being made to fresh-water system, and to serve for circulating water for air compressor; one 6-spindle nut-tapping machine, one band saw filing machine, one 5-ton cupola, one 1-ton cupola, made on station; one Root pressure blower, improvised overhead crane for foundry use, one core-drying oven, built on station; one 800-pound steam hammer, five power forges, built on station; one coppersmith's forge, built on station; one Acme bolt-heading machine, one bolt forge, for use in connection with same, made on station; one annealing furnace, made on station; one copper pipe bending press, improvised for immediate use, two annealing tanks, two small shears for sheet-metal work, one small rolls for sheet-metal work, two hand-punching machines for sheet-metal work.

In one end of the present boiler room two crucible brass furnaces have been built, and one portable core oven and improvised overhead crane installed. The plant has been in constant use since completed and answers admirably where the demands for castings are light, but the floor space is very limited.

Besides the installation of the above additions to the plant, a large number of hand tools for special and general use have been manufactured, such as taps and dies for special work, hammers, tongs, swages

for use with the steam hammer, dies for bolt-forging machine, special dies for use with punch and shears, three moderate-sized portable boring bars, and innumerable lathe, planer, and general hand tools.

The present facilities of this yard are given in the following extract from the report of the head of Department of Steam Engineering:

At present the capacity of the machine shop is limited in size of work capable of being handled to one lathe, 60 inches by 28 feet; one vertical boring mill, 76 inches; one horizontal drilling and boring mill, 3 feet by 14 feet by 1 foot; one planer, 36 inches by 36 inches by 12 feet; one 18-inch slotting machine.

The number of small machines also limits the quantity of general work, there being but eight small lathes at present, besides an assortment of miscellaneous tools.

The capacity for other work can be judged when it is understood that the foundry, smithery, coppersmith, and sheet metal work is all crowded together in a shed 40 by 150 feet; the forge work limited to the capacity of one 800-pound steam hammer, five fires, and one small annealing furnace. Copper work has been confined to one forge containing four fires, improvised methods of bending, and the usual small tools, much of the work being done in the open air.

Considering the facilities at hand the amount and character of work done during the past year reflects great credit on the energy, ability, and ingenuity of the officer in charge, Lieutenant Leopold.

The expenditures during the last year at this yard amounted to \$221,709.70.

NAVAL STATION, SAN JUAN, P. R.

This Bureau has no facilities for repair work at this station, and all such under its cognizance has been done in private establishments.

There is an appropriation available for power tools which will not be expended until shops have been provided.

NAVAL STATION, HAWAII.

This Bureau has no shops at this station, and all work under its cognizance has been done at the private establishments in Honolulu.

There is an appropriation of \$25,000 available for power tools, but they will not be obtained until a place has been provided for them.

NAVAL STATION, CAVITE, P. I.

Considering the lack of facilities, the amount of work done in the Steam Engineering Department of this station has been almost phenomenal, and, comparing its cost with the current prices at private establishments in the vicinity, enough has been saved the Government to pay for the entire outfit.

During the past year repairs have been made to the machinery and boilers of the following vessels or stores and outfits prepared for them: *Ajax*; *Albay*, complete overhauling, including new boiler; *Annapolis*, *Arayat*, general overhauling; *Arethusa*, *Barcelo*, general overhauling and new boiler made; *Basco*, general overhauling, including fitting new boiler; *Brooklyn*, *Calamianes*, general overhauling; *Callao*, riveting up new boiler sent from the United States; *Celtic*, *Christine*; *Don Juan de Austria*, *Elcano*, installing machinery and boilers; *Frolic*, *Gar-doqui*, general repairs and new propeller; *General Alava*, general repairs, new auxiliary boiler made and auxiliary condenser fitted; *Glacier*, *Iris*, general repairs and installation of refrigerating plant and workshop machinery; *Isla de Cuba*, *Isla de Luzon*, extensive

repairs to boilers and machinery; *Kentucky*, *Leyte*, extensive repairs to machinery; *Manila*, extensive repairs; *Manileno*, *Marireles*, extensive repairs, including installation of evaporating plant; *Mindanao*, *Nashville*, *New Orleans*, *New York*, *Pampanga*, general overhauling; *Panay*, general overhauling; *Paragua*, general overhauling; *Piscataqua*, extensive repairs and installation of workshop machinery; *Pompey*, *Princeton*, *Quiros*, general overhauling; *Rainbow*, *Samar*, general overhauling; *Saturn*, *Solace*, *Urdaneta*, *Vicksburg*, general overhauling; *Villalobos*, general overhauling, including auxiliary boiler and evaporating plant; *Wompatuck*, general overhauling, including installing auxiliary condenser and exhaust system; *Yorktown*, *Zafiro*, general overhauling.

Work was also done for other departments on most all of the above vessels and the following additional ones: *Castine*, *Justin*, *Helena*, *Monterey*, *Nanshan*, *Petrel*, *Wilmington*.

In addition to the above the machinery of about twenty small tugs and water boats has been cared for and kept in repair.

Work has been done for all the other departments at the station, principally in making castings and forgings. Many articles have also been manufactured for the general storekeeper to supply deficiencies in stock.

A new boiler shed has been completed, but about a third of the building has been cut off and assigned to the general storekeeper. This makes the building too small for the purpose intended.

The machine-shop floor has been cemented and two new shop boilers have been set up and will be put in use as soon as the condensing apparatus now being constructed is completed.

Requisition has been made for a number of power tools of latest design, and when received and erected at the station its facilities for repair work will be greatly increased.

Much delay has frequently been caused in making repairs from want of proper materials and also from lack of facilities for transporting the workmen to and from vessels. To avoid delay from the first of these causes it will be necessary to carry a large supply of stores on hand in naval-supply fund, since the market for engineers' supplies is very poor in this vicinity and but few can be obtained nearer than Hongkong.

The expenditures at this station during the last year amounted to \$195,235.42.

WORK DONE IN THE INSPECTION OF MATERIAL.

There has been a great increase in the total of material inspected as compared with last year's work, and this large amount of work has been handled with only a small increase in the force of inspectors.

The number of firms filling Government orders continues to increase, resulting in healthy competition, which, combined with strict and impartial inspection, insures the very best in material for all Navy uses.

The Bureau has established a chemical laboratory in the great steel-making district of Pittsburg, Pa. All check analyses of structural material and complete analyses of other material furnished by this district are made now without the delay previously caused by having to send samples for analysis to Bethlehem, Pa.

The Government laboratory at Bethlehem is kept fully occupied making analyses as required for material furnished by the districts east of Pittsburg.

I renew my recommendation of last year that our young line officers should be given the opportunity, under the instruction of the present naval inspectors, to get the experience necessary to enable them to become efficient inspectors in charge. In the one or two cases where this has been done the result has been satisfactory to the Bureau. Junior officers in greater numbers should be ordered for training, as there can be no more zealous or efficient inspectors of material than the officers who will have the care and management of the finished engines, guns, and ships.

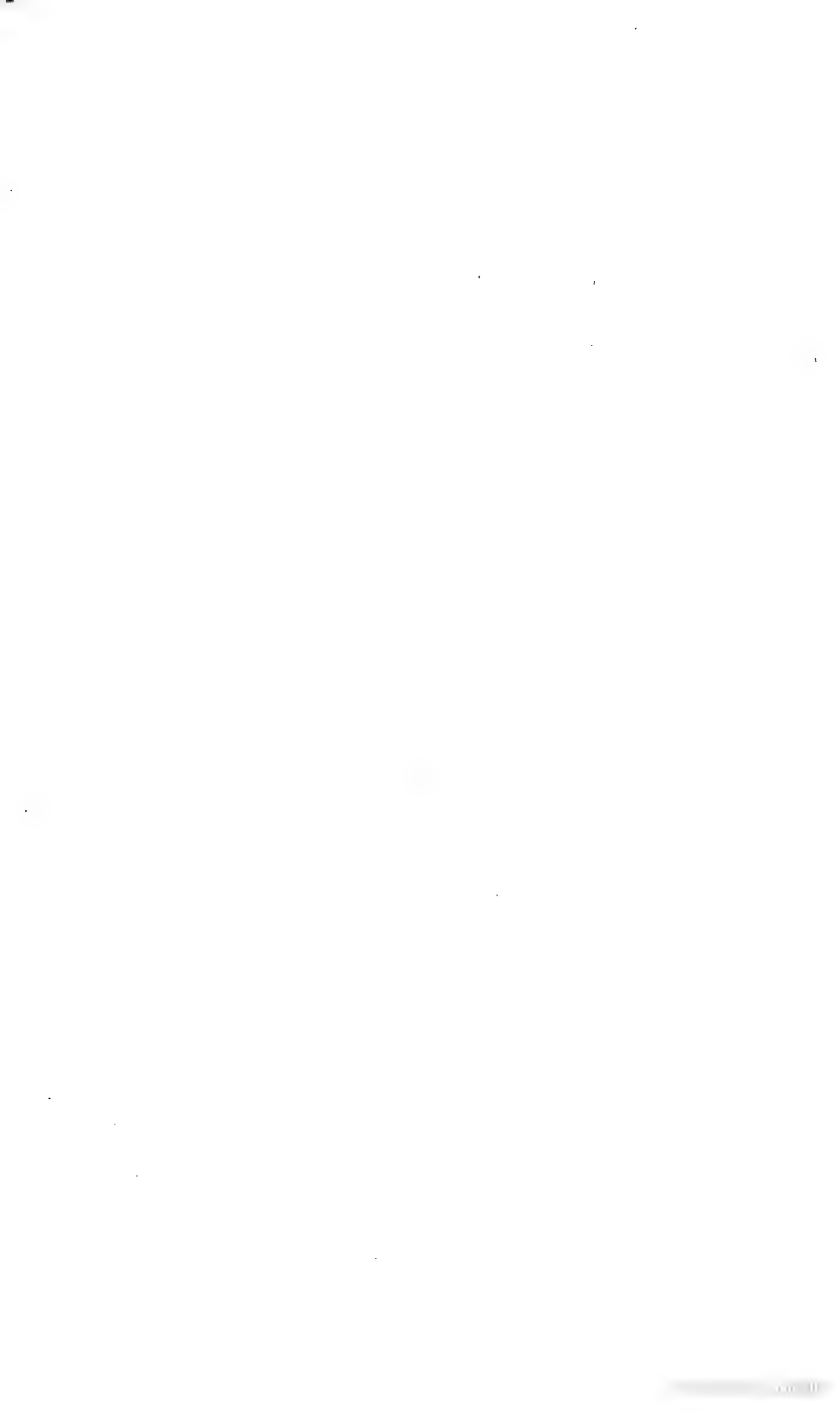
The headquarters of the various inspection districts are as follows:

Homestead Steel Works, Munhall, Pa.—One officer with six civilian assistant inspectors and one copyist do all the inspection work at twenty-eight places, viz: American Bridge Company, Pittsburg, Pa.; A. M. Byers & Co., Pittsburg, Pa.; Carbon Steel Works, Pittsburg, Pa.; Crucible Steel Company of America, Pittsburg, Pa.; Cambria Steel Company, Johnstown, Pa.; Carnegie Steel Company (Upper and Lower Union Mills and Homestead Steel Works), Pittsburg, Pa.; Duquesne Steel Works, Pittsburg, Pa.; Jones & Laughlins, Pittsburg, Pa.; Kidd Brothers & Burgher Steel Wire Company, McKees Rocks, Pa.; Lockhart Iron and Steel Company, Pittsburg, Pa.; Latrobe Steel Works, Latrobe, Pa.; Monongahela Iron and Steel Company, Pittsburg, Pa.; Marshall Foundry Company, Pittsburg, Pa.; National Tube Company, McKeesport, Pa.; Oliver Iron and Steel Company, Pittsburg, Pa.; Park Steel Company, Pittsburg, Pa.; Pittsburg Manufacturing Company, Pittsburg, Pa.; Penn Bridge Company, Beaver Falls, Pa.; Reliance Steel Casting Company, Pittsburg, Pa.; Standard Seamless Tube Company, Ellwood City, Pa.; Shoenberger Steel Company, Pittsburg, Pa.; Spang, Chalfant & Co., Pittsburg and Etna, Pa.; Union Steel Casting Company, Pittsburg, Pa.; Westmoreland Steel Company, Pittsburg, Pa.; Shelby Steel Tube Company, Greenville, Pa.

Nearly all the structural steel used by the bureaus of Yards and Docks and Equipment is rolled in this district. Eleven buildings and structures for these two bureaus are under shop inspection in this district. All boiler tubes over 2 inches in diameter and all steel steam pipe for the Bureau of Steam Engineering are made in this district.

To facilitate the work of inspection in this district the Bureau has established a chemical laboratory, with an assistant inspector, who is a competent chemist, in charge, at the Homestead Steel Works, so that required analyses are made without the delay incident to sending specimens to the laboratory at Bethlehem Steel Works. This has resulted in great saving of time and removed a source of complaint against Government inspection formerly made by the mills in this district.

Midvale Steel Works, Nicetown, Philadelphia, Pa.—One officer and four civilian assistant inspectors and one special laborer do all the inspection work at twenty-two places, viz: Cann & Saul, Philadelphia, Pa.; Camden Iron Works, Camden, N. J.; Glasgow Iron Company, Pottstown, Pa.; Heine Safety Boiler Company, Phoenixville, Pa.; Janney, Steinmitz & Co., Philadelphia, Pa.; Keystone Structural Company, Royersford, Pa.; Lukens Iron and Steel Company, Coatesville, Pa.; Levering & Garrigues, Philadelphia, Pa.; Midvale Steel



Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
		<i>Tons.</i>					<i>In.</i>		<i>Sq. ft.</i>
Abarenda ...	Collier.....	4,670	Vertical, triple expansion.	23	38	62	42	2 single-ended cylindrical.	106
Adams	Cruiser, training ship.	1,375	Horizontal, compound, single screw.	34	.....	51	42	6 return horizontal, tubular.	192
Adder	Submarine torpedo boat.	120	Otto gasoline engine. ^c						
Ajax	Collier.....	7,500	Electric motor. ^d						
Ajax	Collier.....	7,500	Vertical, triple expansion, single screw.	26.5	44	71	60	3 single-ended cylindrical; 1 donkey.	157
Alabama	First-class battle ship.	11,525	Vertical, triple expansion, 2 screws.	33½	51	78	48	8 single-ended cylindrical.	697.6
Albany	Protected cruiser.	3,446	do.....	31	46	70	30	4 double-ended cylindrical.	468
Alert	Cruiser.....	1,020	Horizontal, compound, single screw.	28½	.....	42½	41	2 Babcock & Wilcox.	96
Alexander ..	Collier.....	6,181	Vertical, triple expansion.	23	36	60	42	2 cylindrical and 1 donkey cylindrical.	
Alliance.....	Sailing ship ..								
Amphitrite ..	Double-turret monitor	3,990	Inclined, compound, 2 screws.	32	.....	48	42	6 single-ended cylindrical.	378
Annapolis...	Composite gunboat.	1,000	Vertical, triple expansion, single screw.	15	24½	40	28	2 Babcock & Wilcox.	98
Arethusa	Tank steamer.	6,200	do.....	25	40	66	45	2 horizontal double-ended, 1 auxiliary single-ended.	134
Arkansas	Monitor.....	3,235	Vertical, triple expansion, 2 screws.	17	20½	40	24	4 Thornycroft	198
Armored cruiser No. 10.	Armored cruiser.								
Armored cruiser No. 11.	do.....								
Atlanta.....	Protected cruiser	3,008	Horizontal, triple expansion, single screw.	31	50½	74½	42	4 Babcock & Wilcox, 2 cylindrical.	303
Bagley	Torpedo boat.	165	Vertical, triple expansion, 2 screws.	17.22	24.78	37.37	21	2 Normand...	118
Bailey	do.....	245	do.....	20	30½	32 ^b	18	4 Seabury	236
Barnbridge ..	Torpedo-boat destroyer.	420	do.....	20½	32	38 ^b	22	4 Thornycroft	315
Baltimore ..	Protected cruiser	4,413	Horizontal, triple expansion, 2 screws.	42	60	94	42	4 double-ended cylindrical, 2 single-ended.	656
Bancroft.....	Gunboat ..	839	Vertical, triple expansion, 2 screws.	13½	24	31	20	2 cylindrical straight-way, fire tubular.	87.7
Barney	Torpedo boat.	165	do.....	17.22	24.78	37.37	21	2 Normand...	118
Barry	Torpedo-boat destroyer.	420	do.....	20½	32	38 ^b	22	4 Thornycroft	315

^a Estimated.^b Two low-pressure cylinders.

States naval vessels.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i>	<i>Knots.</i>		<i>Tons.</i>	<i>Knots.</i>	<i>Tons.</i>		
4,000	^a 9.5	1,050	827	6,990	.....	Good	En route to navy-yard, Norfolk.
4,946.4	9.8	800	134	2,200	.....	do	Navy-yard, Mare Island.
.....	^a 8.47	70	850	.....	.....	99 per cent completed ..	Lewis Nixon. Elizabethport, N. J.
.....	^a 12	.....	450	.....	.....	Good	Collier service.
21,692	17.013	11,366	1,339	4,591	1,206.37	do	North Atlantic station.
13,156	20.52	^a 7,500	747	4,375	684.92	do	European station.
4,250	10	560	217	3,742	.....	do	Training service (apprentices).
.....	^a 9	1,026	800	6,858	.....	do	Collier service.
8,800	12	1,600	264	1,300	.....	Good	Special service.
3,620	13.17	1,227	222	5,328	100.82	do	Asiatic station.
.....	^a 10	.....	685	7,000	.....	do	Navy-yard, League Island, Pa.
9,370	^a 11.5	2,400	200	1,680	^a 236	Nearly ready for trial ..	Newport News, Va.
.....	.....	.....	.....	.....	.....	.....	Authorized July 1, 1902.
.....	.....	.....	.....	.....	.....	.....	Do.
10,824	^a 15½	^a 3,500	569	3,594	^a 539	Good	South Atlantic station.
5,552	29.15	^a 3,920	47	.....	.....	do	Torpedo-boat flotilla.
13,230	30.198	^a 5,600	90	.....	147.4	To be repaired	Navy-yard, Norfolk.
17,768	^a 29	8,000	139	.....	^a 189	99 per cent completed ..	Building at Neafie & Levy, Philadelphia, Pa.
17,175	^a 20.1	10,064	1,143	7,212	827.5	Under repairs	Navy-yard, New York.
2,686	14.37	1,213	139	3,169	104.73	Repairing	Navy-yard, Boston.
5,552	29.04	^a 3,920	47	.....	^a 80	Good	Torpedo-boat flotilla.
17,768	^a 28	^a 8,000	139	.....	208.85	99 per cent completed ..	Neafie & Levy, Philadelphia, Pa.

^a Surface.^d Submerged.^e Gallons gasoline.

Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
		Tons.					In.		Sq. ft.
Battle ship No. 18.									
Battle ship No. 19.									
Bennington.	Gunboat.	1,710	Horizontal, triple expansion, 2 screws.	22	31	50	30	4 cylindrical straight-way, arranged tubular.	220
Biddle.	Torpedo boat.	167	Vertical, triple expansion, 2 screws.	17.22	24.78	37.37	21	2 Normand...	118
Blakely.	do.	165	do.	14	22	25½ b	18	3 Normand...	150
Boston.	Protected cruiser.	3,000	Horizontal, 3 cylinder, compound, single screw.	54		74 b	42	8 single-ended, cylindrical, Scotch.	382
Brooklyn.	Armored cruiser.	9,215	Vertical, triple expansion, 2 screws.	32	47	72	42	5 double-ended, and 2 single-ended, cylindrical.	1,016.2
Brutus.	Collier.	6,000	Vertical, triple expansion, inverted direct.	24	40	64	42	2 cylindrical single-ended return tubular; 1 auxiliary, vertical, tubular.	
Buffalo.	Converted cruiser.	6,888	Vertical, triple expansion.	32	52	84	54	3 double-ended return fire, tubular.	409½
Cesar.	Collier.	5,016	Triple expansion.	22½	37	61	42	2 cylindrical; 1 donkey.	
California.	Armored cruiser.	14,000	Vertical, 4 cylinder, triple expansion, 2 screws.	38½	63½	74 b	48	30 Babcock & Wilcox.	1,500
Canonicus.	Single-turret monitor.	2,100	Horizontal, vibrating lever, half trunk (obsolete).	48		48	44	2 Babcock & Wilcox marine type (new).	200
Castine.	Gunboat.	1,177	Vertical, triple expansion, 2 screws.	15½	22½	35	24	2 Normand locomotive.	120
Celtic.	Supply ship.	6,428	Vertical, triple expansion.	26½	44	72	48	2 double-ended, Scotch; 1 donkey.	200
Charleston.	Protected cruiser.	9,700	Vertical, triple expansion, 2 screws.	36	59.5	69.5	45	12 Babcock & Wilcox.	1,400
Chattanooga.	Cruiser.	3,100	do.	18	29	35½ b	30	6 water tube.	314
Chauncey.	Torpedo boat destroyer.	420	do.	20½	32	638	22	4 Thornycroft	315
Chicago.	Protected cruiser.	5,000	Horizontal, triple expansion, 2 screws.	33½	50½	76	40	6 Babcock & Wilcox and 4 single-ended cylindrical.	623.3
Cincinnati.	do.	3,213	Vertical, triple expansion, 2 screws.	24	44.5	65.7	33	8 Babcock & Wilcox.	507
Cleveland.	Cruiser.	3,400	do.	18	29	63½	30	6 Babcock & Wilcox.	314
Colorado.	Armored cruiser.	13,680	do.	38½	63½	674	48	32 Niclausse.	1,600
Columbia.	Protected cruiser.	7,375	Vertical, triple expansion, 3 screws.	42	50	92	42	8 double and 2 single ended cylindrical.	1,408

a Estimated.

b Two low-pressure cylinders.

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i>	<i>Knots.</i>		<i>Tons.</i>	<i>Knots.</i>	<i>Tons.</i>		
							Authorized July 1, 1902.
							Do.
8,210	17.5	3,392	391	4,262	282.65	To be repaired	Navy-yard, Mare Island.
5,552	28.57	3,910	47			Good	Torpedo-boat flotilla.
7,575	24	3,000	70		680	98 per cent completed..	Geo. Lawley & Son, Boston.
8,920	15.6	4,300	503	3,500	662.4	Under repairs	Navy-yard, Mare Island
32,538	21.91	18,770	1,460	5,110	1,333.8	Good	North Atlantic station.
	9	1,200	400	3,500		do	Collier service.
13,513.5	14.5	3,600	1,350	8,500		do	Training vessel.
	10	1,500	817	8,526		do	Collier service.
68,000	22	23,000	2,000	5,000		5 per cent completed..	Union Iron Works.
6,000						Good; engines obsolete; boilers new.	Navy-yard, League Island, Pa.
4,500	16.03	2,190	290	5,008	111.84	Under repairs	Do.
	10.5	1,600	820	6,500		Good	Asiatic station.
64,000	22	21,000				9 per cent completed...	Newport News Co.
12,600	16.5	4,500	800	6,925	405	60 per cent completed..	Crescent Shipyard, New Jersey.
17,768	29	8,000	139	63,024	489	99 per cent completed..	Neafie & Levy, Philadelphia, Pa.
23,252.6	18	9,000	889	3,806	921.64	Good	European station.
19,840	19.9	8,490	577	4,560		do	Training ship—Stromboli.
12,600	16.5	4,500	800	6,925	405	83 per cent completed..	Bath Iron Works, Maine.
70,000	22	23,000				30 per cent completed..	Cramp & Sons.
45,221	22.8	18,500	1,600	7,200	1,705.9	Good	Receiving ship, navy yard, New York

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
Concord	Gunboat	<i>Tons.</i> 1,710	Horizontal, triple expansion, 2 screws.	22	31	50	<i>In.</i> 30	4 cylindrical straight-way, fire tubular.	<i>Sq. ft.</i> 220
Craven	Torpedo boat.	146	Vertical, triple expansion, 2 screws.	17½	24½	37	21	2 Normand. . .	118.7
Culgoa.	Repairship . . .	6,300	Single inverted, vertical, triple expansion.	28	44½	72	48	2 horizontal return fire, tubular, double-ended, 1 vertical donkey.	185
Cushing	Torpedo boat.	105	Vertical, quadruple expansion, 2 screws.	11½	16 (22½)	62½	15	2 Thornycroft	76.6
Dahlgren	do	146	Vertical, triple expansion, 2 screws.	17½	24½	37	21	2 Normand. . .	118.7
Davis	do	132	do	11½	19	62½	15	2 Thornycroft	88
Dale	Torpedo-boat destroyer.	420	do	20½	32	638	22	4 Thornycroft	315
Decatur	do	420	do	20½	32	638	22	do	315
De Long	Torpedo boat.	165	do	14	22	625½	18	3 Normand. . .	150
Denver	Cruiser	3,100	do	18	29	635½	30	6 Babcock & Wilcox.	314
Des Moines	do	3,100	do	18	29	635½	30	do	314
Detroit	Unprotected cruiser	2,089	do	26½	39	63	26	3 double and 2 single-ended cylindrical.	367.9
Dixie	Cruiser	6,145	Triple expansion.	33	52	84	54	3 Scotch	594
Dolphin	Dispatch boat	1,485	Vertical, compound, 2 screws.	42		78	48	2 double and 2 single-ended cylindrical.	269.6
Don Juan de Austria.	Gunboat	1,159	Compound, horizontal, back-acting.	40		70	29½	4 gunboat	160
Dupont	Torpedo boat.	165	Vertical, triple expansion, 2 screws.	16	22½	625	16	3 modified Normand.	160.6
Enterprise	Cruiser	1,375	Vertical, compound.	15		30	24	1 Scotch	
Eriessén	Torpedo boat.	120	Vertical, quadruple expansion, 2 screws.	11½	16 (21½)	30	16	2 Thornycroft	85
Essex	Cruiser	1,375	Vertical, triple expansion.	24	39	59	48	4 Scotch single ended.	128.4
Farragut	Torpedo boat.	276	Vertical, triple expansion, 2 screws.	20	29	630	18	3 Thornycroft	196
Fern	Tender	840	Vertical, compound	22		36	34	1 straight through.	41
Florida	Monitor	3,214	Vertical, triple expansion, 2 screws.	17	26½	40	24	4 Mosher	240
Foote	Torpedo boat.	142	do	14	19½	622	16	2 Mosher	95
Fox	do	132	do	11½	19	622½	15	2 Thornycroft	88
Frolic	Converted gunboat.	607	Vertical, triple expansion, single screw.	14	23	36	24	1 single-ended Scotch, 1 auxiliary.	
Galveston	Cruiser	3,100	Vertical, triple expansion, 2 screws.	18	29	635½	30	6 Babcock & Wilcox.	314
Georgia	First-class battleship.	15,000	do	35	57	666	48	24 Babcock & Wilcox.	1,280

a Estimated.

b Two low-pressure cylinders.

BUREAU OF STEAM ENGINEERING.

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i>	<i>Knots.</i>		<i>Tons.</i>	<i>Knots</i>	<i>Tons.</i>		
8,210	16.8	3,404	380	4.142	284.58	Under repairs	Navy-yard, Mare Island.
5,553	30.1	4,200	32	1,498		Good	Torpedo station, Newport, R. I.
	14.6	1,896	968	7,000		Being fitted for repair ship.	Navy-yard, Boston.
4,750	22.5	1,720	39	1,092	54.5	Good	In reserve, navy-yard, Norfolk.
5,553	30.5	4,200	32	1,498		do	Torpedo station, Newport, R. I.
4,763	23.41	1,750	40		52.04	do	Navy-yard, Mare Island.
17,768	26.62	8,000	139	2,500	201.26	Completing for final acceptance.	W. R. Trigg & Co., Richmond, Va.
17,768	28.1	8,000	139	2,500	201.25	Good	Torpedo-boat flotilla.
7,575	24.03	3,000	70	1,680	80	Completing for final acceptance.	Geo. Lawley & Son.
12,600	16.5	4,500	800	6,925	405	82 per cent completed..	Seafie & Levy, Philadelphia, Pa.
12,600	16.5	4,500	800	6,925	405	72 per cent completed..	Fore River Ship and Engine Co., Quincy, Mass.
10,978	18.71	5,227	352	3,280	400.31	Repairing	Navy-yard, Portsmouth, N. H.
	16	3,800	1,294	7,000		Good	Navy-yard, New York.
8,161.7	14.6	2,255	265	3,180	410	do	Special service.
4,442.28	13.5	1,500	225	2,077		Fair	Asiatic station.
8,287.7	26.5		43	1,247	77.95	Good	In reserve, navy-yard, Norfolk.
	11.4	800	45			do	School ship, Massachusetts.
4,698	22.62	1,875	40	984	57.47	do	In reserve, navy-yard, Norfolk.
2,964	10.5	800	165	1,440		do	Training ship (apprentices).
9,912	30.13	5,600	76	2,250	108.31	do	Pacific station.
1,490.44	9	300	80	2,500		Fair	Loaned to naval militia, District of Columbia.
9,460	11.5	2,400	200	1,680	236	97 per cent completed..	Crescent shipyard, New Jersey.
5,260	24.53	2,000	43	1,235	50.82	Good	In reserve, navy-yard, Norfolk.
4,763	22.05	1,750	40	2,000	51.92	do	Navy-yard, Mare Island.
1,235	11	550	105	2,500		do	Asiatic station.
12,600	16.5	4,500	800	6,925	405	61 per cent completed..	W. R. Trigg Co., Richmond, Va.
55,000	19	18,000	1,900	44,800		11 per cent completed..	Bath Iron Works.

f At 14 knots (estimated).

Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H.P.	I.P.	L.P.			
Glacier	Supply boat ..	<i>Tons.</i> 7,000	Vertical, triple expansion.	30	48	78	<i>In.</i> 54	3 double-ended return fire tubular Scotch; 1 single-ended auxiliary.	<i>Sq. ft.</i> 243
Gloucester ..	Converted gunboat.	786	do.....	21	32	54	30	2 Scotch single ended.	
Goldsbrough.	Torpedo boat ..	247½	Vertical, triple expansion, 2 screws.	19½	31½	<i>b</i> 35½	20	3 Thornycroft.	216
Grampus ...	Submarine torpedo boat.	120	Otto gasoline engine. ^c Electric motor. ^d						
Gunboat No. 16.									
Gunboat No. 17.									
Gwin	Torpedo boat.	46	Vertical, triple expansion, 1 screw.	12½	18	25	13½	1 Normand ..	38
Gen. Alava ..	Transport	1,390	do.....	17	27	45	30	Cylindrical, horizontal return fire tubular.	81.6
Hannibal	Collier.....	1,291	Vertical, triple expansion.	20½	33	54	39	2 horizontal Scotch tubular.	
Hartford.....	Cruiser.....	2,790	Horizontal, compound, 1 screw.	35		66	48	4 single-ended cylindrical.	186.4
Helena	Light-draft gunboat.	1,392	Vertical, triple expansion, 2 screws.	14½	22	33½	18	6 single-ended cylindrical.	126
Hopkins	Torpedo-boat destroyer.	408	do.....	22	32½	<i>b</i> 34	18	4 Thornycroft	294
Hull.....	do.....	408	do.....	32½		<i>b</i> 34	18	do.....	294
Holland	Submarine torpedo boat.	74	Otto gasoline engine. ^c Electric motor. ^d	22					
Illinois	First-class battle ship.	11,525	Vertical, triple expansion, 2 screws.	33½	51	78	48	8 single-ended cylindrical.	6848
Indiana	do.....	10,288	do.....	34½	48	75	42	4 double and 2 single ended cylindrical.	616
Iowa	do.....	11,340	do.....	39	55	85	48	3 double and 2 single ended cylindrical.	756
Iris	Distillingship.	6,100	Vertical, compound condensing.	31		70	48	2 double-ended Scotch, 1 donkey.	154
Isla de Cuba.	Gunboat	1,030	Horizontal, triple expansion, 2 screws.	18½	29	43	24	2 gunboat type, cylindrical, horizontal, single ended.	148.5
Isla de Luzon.	do.....	1,030	do.....	18½	29	43	24	2 gunboat.....	148.5
Jason.....	Single-turret monitor.	1,875	Horizontal, vibrating lever, half trunk (obsolete).	40		40	22	Obsolete.	
Justin	Collier	3,300	Vertical, triple expansion.	21	35	57.5	39	2 single-ended return-fire tubular.	

^a Estimated.^b Two low-pressure cylinders.

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i>	<i>Knots.</i>		<i>Tons.</i>	<i>Knots.</i>	<i>Tons.</i>		
7,310	12.3	1,650	949	6,000	.....	Good	Asiatic station.
.....	17	^a 2,000	93	1,830	.....	do	Naval Academy.
13,500	^a 30	5,850	131	.....	.....	95 per cent completed ..	Navy-yard, Puget Sound.
.....	^{a d} 7 ^{a c} 8	160	^c 850	.....	.....	.....	Union Iron Works, San Francisco, Cal.
.....	.....	.....	.....	.....	.....	.....	Authorized July 1, 1902.
.....	.....	.....	.....	.....	.....	.....	Do.
1,870	20.88	850	8	500	15.6	Good	Naval Academy.
1,855	10	770	120	2,400	.....	Fair	Asiatic station.
.....	^a 10	^a 1,100	275	4,500	.....	do	Collier service.
6,340	12	2,000	286	.....	^a 290	Good	Training ship (apprentices).
4,800	15.50	1,988	274	2,200	185.18	do	Asiatic station.
17,612	^a 29	7,200	150	.....	^a 189	94 per cent completed ..	The Harlan & Hollingsworth Co., Wilmington, Del.
17,612	^a 29 8	^a 7,200 50	150	^a 2,700	^a 189	93 per cent completed ..	Do.
.....	.....	.....	.....	.....	.....	.....	Naval Academy.
21,649	17.449	12,898.7	1,297	4,447	.....	Good	European station.
19,194.6	15.55	9,738	1,550	3,720	1,241.85	do	Naval cadet practice ship, Naval Academy.
24,082.2	17.09	12,105	1,600	4,000	1,292.87	do	South Atlantic station.
5,114	10.5	^a 1,300	2,475	10,960	.....	do	Asiatic station.
5,508.5	13.08	807	160	1,920	.....	do	Do.
5,508.5	11.23 5 to 6	534.7	160	1,920	.....	do	Do.
.....	.....	.....	.....	.....	.....	Good, but obsolete	Navy-yard, League Island, Pa.
.....	^a 10.9	.....	185	3,700	.....	Good	Asiatic station.

^c Surface.^d Submerged.^e Gallons gasoline.

Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
Katahdin ...	Harbor-defense ram.	Tons. 2,155	Horizontal, triple expansion, 2 screws.	25	36	56	36	2 double and 1 single ended cylindrical.	Sq. ft. 354
Kearsarge ...	First-class battle ship.	11,525	Vertical, triple expansion, 2 screws.	33.5	51	78	48	3 double and 2 single ended cylindrical.	685
Kentucky ...	do	11,525	do	33.5	51	78	48	do	685
Lancaster ...	Cruiser	3,250	Single horizontal, back acting.	60		60	36	2 main and 2 auxiliary horizontal, tubular.	342
Lawrence ...	Torpedo-boat destroyer.	400	Vertical, triple expansion, 2 screws.	22	31	63	20	4 Fore River.	304
Lebanon	Collier	3,375	Vertical, triple expansion.	19	30	50	30	2 Scotch single ended.	209
Lehigh	Single-turret monitor.	1,875	Simple horizontal, vibrating lever, half trunk (obsolete).	40		40	22	Obsolete	
Leonidas	Collier	4,242	Vertical, triple expansion.	20.5	33	54	39	2 Clark type; 1 donkey, Cochran type.	
Machias	Gunboat	1,177	Vertical, triple expansion, 2 screws.	15.75	22.5	35	24	2 marine locomotive.	120
Macdonough	Torpedo-boat destroyer.	400	do	22	31	63	24	4 Fore River	304
Mackenzie ..	Torpedo boat.	65	Vertical, triple expansion, 1 screw.	12	19.25	62	16	2 Thornycroft	40
Maine (new) ..	First-class battle ship.	12,500	Vertical, triple expansion, 2 screws.	38.5	59	72	42	24 Niclausse	1,353
Manila	Transport	1,800	2 cylinder, compound.	32		61	39	2 single-ended Scotch, 1 vertical auxiliary.	17
Manly	Torpedo boat.	30	Single screw						
Marblehead ..	Unprotected cruiser.	2,089	Vertical, triple expansion, 2 screws.	26.5	39	63	26	3 double and 2 single ended cylindrical.	414
Marcellus ...	Collier	4,400	Vertical, compound, inverted.	38		66	60	2 return-fire tubular.	
Marietta	Composite gunboat.	1,000	Vertical, triple expansion, 2 screws.	12	18	28	18	2 Babcock & Wilcox.	94
Maryland ...	Armored cruiser.	13,680	do	38	63	67	48	16 Babcock & Wilcox.	1,590
Massachusetts.	First-class battle ship.	10,288	do	34.5	48	75	42	4 double and 2 single-ended cylindrical.	616
Mayflower ...	Converted cruiser	2,690	do	22.5	38	64	27	2 single-ended cylindrical and 1 vertical.	212
McKee	Torpedo boat.	65	Vertical, triple expansion, 1 screw.	12	19.25	62	16	2 Thornycroft	40
Miantonomoh.	Double-turret monitor.	3,990	Compound, inclined, 2 screws.	32		48	42	6 single-ended cylindrical.	369
Michigan	Paddle-wheel cruiser.	685	Inclined, simple	36		36	96	2 flue and return-fire tubular.	91

a Estimated

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
Sq. ft.	Knots.		Tons.	Knots.	Tons.		
12,150	16.11	5,068	202	1,000	413.34	Good	Navy-yard, League Island, Pa.
22,104	16.8	10,000	1,573	5,316	1,195	do	North Atlantic station.
22,104	16.9	10,000	1,591	5,360	1,197	do	Asiatic station.
4,330	a 9.7	1,000	326	.....	.....	Fair	Training ship (landsmen).
18,117	a 30	a 8,400	115	1,920	a 189	99 per cent completed..	Fore River Ship and Engine Co., Quincy, Mass.
.....	12.5	.....	260	.....	.....	Good	Collier service.
.....	.....	.....	.....	.....	.....	Good (obsolete)	Navy-yard, League Island, Pa.
.....	a 9.5	1,100	550	5,000	.....	Good	Collier service.
4,590	15.46	1,873	200	4,500	143.7	do	North Atlantic station.
18,117	a 30	8,400	115	a 1,920	a 189	98 per cent completed..	Fore River Ship and Engine Co., Quincy, Mass.
2,168	20.11	1,192	15.3	720	26.6	Good	Navy-yard, New York.
58,104	a 18	16,000	2,000	a 6,000	a 1,130	91 per cent completed..	Wm. Cramp & Sons, Philadelphia.
3,191	a 11	800	200	2,160	.....	Poor	Navy-yard, Mare Island, Cal.
11,058	17 18.44	5,450	330	2,900	429.9	Good	Naval Academy.
.....	a 11	1,200	210	.....	.....	Repairing	Navy-yard, Mare Island, Cal.
.....	.....	.....	.....	.....	.....	.....do	Navy-yard, Norfolk, Va.
3,664	13.02	1,054	246	5,470	110.15	Good	North Atlantic station.
68,000	22	23,000	.....	.....	.....	23 per cent completed..	Newport News Co.
19,194.6	16.21	10,415	1,560	4,500	1,062	Good	North Atlantic station.
6,600	16.75	4,600	519	6,120	.....	.....do	Special service.
2,294	19.82	850	15	720	22.68	do	Torpedo station, Newport, R. I.
8,781	10	1,426	240	1,200	509.77	do	Navy-yard, League Island, Pa.
2,572	.....	.....	125	2,240	.....	.....do	Special service on Great Lakes.

b Two low-pressure cylinders.

Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
Milwaukee...	Protected cruiser.	<i>Tons.</i> 9,700	Vertical, triple expansion, 2 screws.	36	59½	639	45	16 Babcock & Wilcox.	<i>Sq. ft.</i> 1,400
Minneapolis...	do	7,375	Vertical, triple expansion, 3 screws.	42	59	92	42	8 double and 2 single ended cylindrical.	1,520.2
Missouri...	First-class battle ship.	12,500	Vertical, triple expansion, 2 screws.	34.75	53	633	48	12 Thornycroft	1,000
Moccasin...	Submarine torpedo boat.	120	Otto gasoline engine.						
Mohican...	Cruiser	1,900	Horizontal, back-acting, compound.	42		64	42	8 cylindrical, return-fire, tubular.	256
Monadnock...	Double-turret monitor.	3,990	Horizontal, triple expansion, 2 screws.	19.75	30.75	52.75	30	4 single-ended cylindrical.	200
Monocacy...	Light-draft gunboat.	1,370	Paddle wheel, inclined, simple.	58.05			105	2 main rectangular, 2 horizontal, return tubular.	146.3
Montauk...	Single-turret monitor.	1,875	Horizontal, vibrating lever, half trunk (obsolete).	40	40		22	Obsolete	
Monterey...	Barbette turret, low free-board monitor.	4,084	Vertical, triple expansion, 2 screws.	27	41	64	30	4 Ward and 2 single-ended cylindrical.	383.2
Montgomery	Unprotected cruiser.	2,089	do	26.5	39	63	26	3 double and 2 single ended cylindrical.	358
Morris...	Torpedo boat.	105	do	12.5	18	25	13.5	2 modified Normand.	80
Nahant...	Single-turret monitor.	1,875	Horizontal, vibrating lever, half trunk (obsolete).	40		40	22	Obsolete	
Nanshan...	Collier.	1,827	Vertical, triple expansion.	23	33	61	42	2 cylindrical, return-fire, tubular, 1 donkey.	
Nashville...	Light-draft gunboat.	1,719	Vertical, quadruple expansion, 2 screws.	11	{17 24}	34	18	4 Yarrow and 2 single-ended cylindrical.	142
Nebraska...	First-class battle ship.	14,948	Vertical, triple expansion, 2 screws.	35	57	666	48	24 Babcock & Wilcox.	1,280
Nero...	Collier.	1,925	Vertical, triple expansion.	23	37½	61½	39	2 single-ended cylindrical, 1 auxiliary vertical cylindrical.	
Nevada...	Single-turret monitor.	1,235	Vertical, triple expansion, 2 screws.	17	26½	40	24	4 Niclausse	200
Newark...	Protected cruiser.	1,098	Horizontal, triple expansion, 2 screws.	34	52	76	40	4 double and 1 single-ended cylindrical.	561.4
New Jersey...	First-class battle ship.	15,000	Vertical, triple expansion, 2 screws.	35	57	666	48	24 Babcock & Wilcox.	1,280
New Orleans.	Protected cruiser.	2,437	do	31	46	70	30	4 double-ended cylindrical, 1 small donkey.	480

a Estimated.

b Two low-pressure cylinders.

BUREAU OF STEAM ENGINEERING.

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i>	<i>Knots.</i>		<i>Tons.</i>	<i>Knots</i>	<i>Tons.</i>		
58,800	22	21,000				9 per cent completed...	Union Iron Works.
50,147	23.07	20,862	1,520	6,300	1,672	Good	Receiving ship, navy-yard, League Island, Pa.
51,372	a 18	16,000	2,000	6,000	a 1,130	10 per cent completed..	Newport News, Va.
	a 8	160	e 850			Contract with the Holland Torpedo Boat Co.	Lewis Nixon, Elizabethport, N. J.
6,574.4		a 1,150	150			Good	Training ship (landsmen).
6,242	11.63	2,163	386	2,969	292.8	do	Asiatic station.
6,254	11.2	850	224	1,680		Fair	Do.
						Good, but obsolete.....	Navy-yard, League Island, Pa.
14,785	13.6	5,244	220	1,430	451.92	Good	Asiatic station.
11,058	19.06	5,584	351	3,200	401.27	Ready for commission..	Navy-yard, New York.
4,004	24	1,750	a 28	a 1,500	32.39	Good	Naval station, Newport, R. I.
						Good, but obsolete.....	Navy-yard, League Island, Pa.
	11.2	1,400	400	4,224		Good	Asiatic station.
5,350	16.3	2,536	395	3,400	170.74	do	European station.
55,000	a 19	a 18,000				Not commenced.....	Moran Bros., Seattle, Wash.
	a 9	a 1,000	323	4,500		Good	Collier service.
8,800	a 11.5	a 2,400	400	a 1,680	a 236	93 per cent completed..	Bath Iron Works.
17,295	a 19	8,868	790	5,656	653	Repairing	Navy-yard, Boston.
55,000	a 19	18,000				10 per cent completed..	Fore River Ship and Engine Co., Quincy, Mass.
14,378	a 21	7,500	743	6,085		Good	Asiatic station.

a Surface.

d Submerged.

e Gallons gasoline.

Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
		Tons.					In.		Sq. ft.
Newport.....	Composite gunboat.	1,000	Vertical, triple expansion, 1 screw.	15.5	23.5	36	30	2 single-ended cylindrical.	78
New York ...	Armored cruiser.	8,200	4 vertical, triple expansion, 2 screws.	32	47	72	42	6 double and 2 single-ended cylindrical.	1,052
Nicholson ...	Torpedo boat.	174	Vertical, triple expansion, 2 screws.	18	27	b27.5	18	3 Mosher.....	157.5
O'Brien.....	do.....	174	do.....	18	27	b27.5	18	3 water-tube.	157.5
Ohio.....	First-class battle ship.	12,500	do.....	35.5	53	b63	48	12 Thornycroft.	960
Olympia.....	Protected cruiser.	5,870	do.....	42	59	92	42	4 double and 2 single-ended cylindrical.	824
Oregon.....	First-class battle ship.	10,288	do.....	34.5	48	75	42	do.....	616
Panther.....	Converted cruiser.	4,260	Vertical, triple expansion, 1 screw.	25	41	67	42	4 single-ended scotch, 1 auxiliary.	
Paul Jones....	Torpedo-boat destroyer.	420	Vertical, triple expansion, 2 screws.	20.5	32	b38	22	4 Thornycroft.	315
Pennsylvania.	Armored cruiser.	13,680	do.....	38.5	63.5	b74	48	32 Nielauss..	1,600
Perry.....	Torpedo-boat destroyer.	471.5	do.....	20.5	32	b38	22	4 Thornycroft.	315
Petrel.....	Gunboat.....	892	Horizontal compound, 1 screw.	25		46	33	2 cylindrical straightway.	93.2
Philadelphia	Protected cruiser.	4,324	Horizontal, triple expansion, 2 screws.	38	58	86	40	4 double and 1 single-ended cylindrical.	645.4
Pike.....	Submarine torpedo boat.	120	Otto gasoline engine ^c .						
Plunger.....	do.....		Electric motor ^d .						
Pompey.....	Collier.....	3,085	Otto gasoline engine ^c .						
Porpoise.....	Submarine torpedo boat.	120	Electric motor ^d .						
Porter.....	Torpedo boat.	165	Inverted triple expansion.	18	30	52	36	1 Scotch, 1 donkey.	
Prairie.....	Converted cruiser.	6,872	Otto gasoline engine ^c .						
Preble.....	Torpedo boat destroyer.	174.7	Electric motor ^d .						
Princeton ...	Composite gunboat.	1,000	Vertical, triple expansion, 2 screws.	16	22.5	b25	16	3 modified Normand.	160.6
Puritan.....	Double-turret monitor.	6,060	Vertical, triple expansion, 1 screw.	32	52	84	54	3 double-ended Scotch, 1 small auxiliary.	447
Rainbow.....	Distilling ship	6,200	Vertical, triple expansion, 2 screws.	20.5	32	b38	22	4 Thornycroft.	315
Raleigh.....	Protected cruiser.	3,213	Vertical, triple expansion, 1 screw.	15½	23.5	36	30	2 single-ended cylindrical.	78
			Horizontal compound, 2 screws.	50		86	42	8 single-ended cylindrical.	504
			Vertical, triple expansion, 1 screw.	28	44	72	48	Scotch.....	
			Vertical, triple expansion, 2 screws.	24	44.5	b57	33	8 Babcock & Wilcox.	507

^a Estimated.^b Two low-pressure cylinders.^c Gallons gasoline.

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i>	<i>Knots.</i>		<i>Tons.</i>	<i>Knots.</i>	<i>Tons.</i>		
2,524	12.29	1,009	232	3,967	109.69	Good	Training station, Newport, R. I.
32,958	21	17,401	1,200	5,000	1,311.3	do	Asiatic station.
8,406	a 26	a 3,500	.....	.....	80	98 per cent completed ..	Crescent Shipyard, New Jersey.
8,406	a 26	3,500	.....	.....	a 80	do	Do.
53,244	a 18	15,100	2,000	a 6,000	a 1,130	60 per cent completed ..	Union Iron Works, California.
28,298.6	21.68	17,313	1,100	6,105	1,162.56	Good	North Atlantic station.
18,759	16.79	11,111	1,590	5,500	1,009.23	do	Repairing, navy-yard, Puget Sound.
.....	13	.....	480	3,300	.....	.....do	Navy-yard, New York.
17,783	a 29	8,000	.....	.....	a 189	.....	Union Iron Works, California.
70,000	22	a 23,000	.....	.....	.....	27 per cent completed ..	Wm. Cramp & Sons, Philadelphia.
17,763	27.1	a 7,950	.....	.....	a 189	Good	Navy-yard, Mare Island.
2,796	11.55	1,045	200	4,000	112.5	Under repair	Do.
20,989	19.68	8,815	1,020	6,354	705.36	Good	Pacific station.
.....	a 8	a 120	e 850	.....	.....	74 per cent completed ..	Union Iron Works, San Francisco, Cal.
.....	a 8	.....	.....	.....	.....	93 per cent completed ..	Lewis Nixon, Elizabethport, N. J.
.....	10.5	.....	230	a 3,000	.....	Good	Asiatic station.
.....	a 8	a 120	e 850	.....	.....	97 per cent completed ..	Lewis Nixon, Elizabethport, N. J.
8,288	28.63	.....	43	1,190	77.95	Good	In reserve, navy-yard, Norfolk, Va.
10,506	a 14.5	a 3,800	1,144	6,500	.....	.....do	Training service (landsmen).
17,782.9	28.23	7,370.5	.....	.....	a 189	do	Navy-yard, Mare Island.
2,524	a 12	923	239	4,670	104.46	do	Asiatic station.
12,500	a 12.5	3,700	310	1,140	.....	.....do	Special service.
.....	a 12	a 1,800	916	4,872	.....	.....do	Asiatic station.
21,130	a 20	a 8,500	a 577	a 4,500	.....	Being remodeled	Navy-yard, Portsmouth, N. H.

d Submerged.

a Surface.

Machinery data of United

Name of vessel.	Type of vessel.	Displacement.	Type of engine	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
Ranger	Cruiser	<i>Tons.</i> 1,020	Horizontal compound, back-acting.	28 $\frac{1}{16}$	.....	42 $\frac{1}{2}$	42	4 cylindrical return-fire tubular.	<i>Sq. ft.</i> 120
Reina Mercedes.	Protected cruiser.	3,090	.....	.....	.....	.....	.....	.....	.....
Rhode Island	First-class battle ship.	14,948	Vertical, triple expansion, 2 screws.	35	57	66	48	24 Babcock & Wilcox.	1,280
Rodgers	Torpedo boat.	142	do	12	19 $\frac{1}{2}$	62 $\frac{1}{2}$	16	2 Mosher	95
Rowan	do	182	do	14.5	23	62 $\frac{1}{2}$	18	3 Mosher	113.4
San Francisco	Protected cruiser.	4,098	Horizontal, triple expansion, 2 screws.	40	60	94	36	4 double and 1 single ended cylindrical.	567.6
Saturn	Collier	6,220	Vertical, triple expansion, inverted.	22	32	52	48	4 Scotch double-flue, 1 donkey.	.....
Scorpion	Converted gunboat.	850	Vertical, triple expansion.	15	24	39	21	4 main and 1 auxiliary Yarrow.	159.4
Shark	Submarine torpedo boat.	120	Otto gasoline engine, ^c	.....	.....	.....	.....	.....	.....
Shubrick	Torpedo boat.	165	Electric motor, ^d Vertical, triple expansion, 2 screws.	14	22	62 $\frac{1}{2}$	18	3 Thornycroft	137
Siren	Converted gunboat.	315	Vertical, triple expansion, 1 screw.	10	16	28	20	1 Scotch .....	.....
Solace	Hospital ship.	4,700	Vertical, triple expansion.	28	44	74	54	3 double ended Scotch, 1 single ended auxiliary.	888
Somers	Torpedo boat.	145	Vertical, quadruple expansion, 1 screw.	17	$\left\{ \begin{smallmatrix} 24 \\ 33 \frac{1}{2} \end{smallmatrix} \right\}$	42 $\frac{1}{2}$	18 $\frac{1}{2}$	1 locomotive type.	47
Southery	Collier	3,100	Vertical, triple expansion, inverted.	21	35	57 $\frac{1}{2}$	39	2 single-ended return-fire tubular, 1 auxiliary vertical cylindrical.	.....
South Dakota	Armored cruiser.	613,410	Vertical, triple expansion, 2 screws.	38 $\frac{1}{2}$	63 $\frac{1}{2}$	67 $\frac{1}{2}$	48	16 Babcock & Wilcox.	1,400
Sterling	Collier	5,663	Triple expansion.	20	32	53	42	1 Scotch, 1 auxiliary upright.	.....
St. Louis	Protected cruiser.	9,700	Vertical, triple expansion.	36	59 $\frac{1}{2}$	69	45	16 Babcock & Wilcox.	1,400
Stewart	Torpedo-boat destroyer.	420	Vertical, triple expansion, 2 screws.	20.5	32	63 $\frac{1}{2}$	22	4 Seabury	315
Stiletto	Torpedo boat.	31	Vertical, compound, 1 screw.	12	21	.....	12	1 Almy	20
Stockton	do	165	Vertical, triple expansion, 2 screws.	14	22	62 $\frac{1}{2}$	18	3 Thornycroft	137
Stringham	do	340	do	22	32 $\frac{1}{2}$	63 $\frac{1}{2}$	18	4 Thornycroft	252
Supply	Supply ship ..	4,460	Vertical, triple expansion, 1 screw.	23	36	60	36	1 main, 2 auxiliary Scotch.	114
Tacoma	Cruiser	3,100	Vertical, triple expansion, 2 screws.	18	29	63 $\frac{1}{2}$	30	6 Babcock & Wilcox.	314

^a Estimated.^b Two low-pressure cylinders.^c Surface.^d Submerged.^e Gallons gasoline.

BUREAU OF STEAM ENGINEERING.

States naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
<i>Sq. ft.</i> 2,945	<i>Knots.</i> a 10	<i>a 500</i>	<i>Tons.</i> 178	<i>Knots</i>	<i>Tons.</i>		
						Good	Special service.
						Unfit for service	Navy-yard, Portsmouth N. H.
55,000	19	19,000				10 per cent completed ..	Fore River Ship and Engine Co.
5,260	24.5	2,411	44	1,200	50.82	Good	In reserve, navy-yard, Norfolk, Va.
7,890	27.07	3,200	60	1,800	82.71	do	Naval station, Puget Sound.
20,134	19.52	10,604	627	4,000	749.12	do	European station.
	11	1,500	335	3,500		do	Asiatic station.
8,386	17.85	2,800	150	4,000		do	North Atlantic station.
	a 8	a 160	a 850			96 per cent completed ..	Lewis Nixon, Elizabethport, N. J.
7,548	a 26	3,000	70	2,240	a 80	Good	Torpedo-boat flotilla.
	11		45			Fair	Tender to Franklin
10,910	a 15	a 3,200	985	7,000		Good	Transport service to Manila.
2,242	a 23	a 1,900	30			do	In reserve, navy-yard, Norfolk, Va.
	a 11		380	5,500		Fair	Prison ship, navy-yard, Boston.
58,800	a 22	a 23,000				5 per cent completed ...	Union Iron Works.
	a 11	a 1,000	550	7,000		Good	Collier service.
58,800	22	21,000				3 per cent completed ...	Neafie & Levy.
17,782	a 29	8,000	139		a 189	72 per cent completed ..	Gas Engine and Power Co., New York.
1,100	18.22	359	6	168	16.95	Good	Torpedo station.
7,548	a 26	3,000	70	1,680	a 80		Torpedo-boat flotilla.
16,020	a 30	7,200	120			Ready for trial	Harlan & Hollingsworth Co., Delaware.
		1,069	1,029	8,160		Good	Navy-yard, New York.
12,600	a 16.5	4,500	800	6,925	a 405	50 per cent completed ..	Union Iron Works, California.

Name of vessel.	Type of vessel.	Displacement.	Type of engine.	Cylinder diameter.			Stroke.	Number and type of boilers.	Total grate surface.
				H. P.	I. P.	L. P.			
		<i>Tons.</i>					<i>In.</i>		<i>Sq. ft.</i>
Talbot.....	Torpedo boat.	46½	Vertical, triple expansion, 1 screw.	12.5	18	25	13.5	1 Normand...	38
Terror.....	Double-turret monitor.	3,990	Inclined, compound, 2 screws.	32		48	46	6 single-ended cylindrical.	378
Texas.....	Second-class battle ship.	6,315	Vertical, triple expansion, 2 screws.	36	51	78	39	4 double-ended cylindrical.	531.6
Thornton....	Torpedo boat.	165	do.....	11	22	625½	18	3 Thornycroft.	137
Tingey.....	do.....	165	do.....	14	22	625½	18	do.....	137
Topeka.....	Gunboat.....	2,372	Horizontal, compound, 2 screws.	36		69	36	2 double and 2 single ended cylindrical.	
Truxton.....	Torpedo-boat destroyer.	433	Vertical, triple expansion, 2 screws.	23	34	637	20	4 Thornycroft.	300
Vesuvius....	Dynamite-gun vessel.	929	do.....	21.5	31	634	20	4 marine locomotive.	195
Vicksburg...	Composite gunboat.	1,000	Vertical, triple expansion, 1 screw.	15.5	23.5	36	30	2 single-ended cylindrical.	78
Virginia.....	First-class battle ship.	14,948	Vertical, triple expansion, 2 screws.	35	57	66	48	16 Babcock & Wilcox.	1,590
Vixen.....	Converted gunboat.	806	do.....	18	27	48	25	2 single-ended cylindrical return-fire tubular.	
Wasp.....	do.....	630	Inverted, triple expansion.	21.5	31	634	20	2 Scotch, 1 donkey.	
West Virginia.	Armored cruiser.	14,000	Vertical, triple expansion, 2 screws.	38½	63½	74	48	16 Babcock & Wilcox.	1,590
Wheeling....	Composite gunboat.	1,000	do.....	12	18	28	18	2 single-ended cylindrical.	60
Whipple.....	Torpedo-boat destroyer.	433	do.....	23	34	637	20	4 Thornycroft.	300
Wilkes.....	Torpedo boat.	165	do.....	14	22	625½	18	3 Seabury	137.4
Wilmington..	Light-draft gunboat.	1,392	do.....	14.5	22	33.75	18	6 single-ended cylindrical.	126
Winslow.....	Torpedo boat.	142	do.....	12	19½	622	16	2 Mosher.....	95
Wisconsin...	First-class battle ship.	11,525	do.....	33.5	51	78	48	8 single-ended cylindrical.	640
Worden.....	Torpedo-boat destroyer.	433	do.....	23	34	637	20	4 Thornycroft.	300
Wyoming...	Monitor.....	3,214	do.....	17	26½	40	21	4 Babcock & Wilcox.	216
Yankee.....	Converted cruiser.	6,888	Vertical, triple expansion, 1 screw.	32	52	84	54	3 double-ended, 1 single ended, Scotch.	493.4
Yankton.....	Converted gunboat.	975	do.....	18	29	47	33	1 single-ended cylindrical, Scotch.	67
Yantic.....	Cruiser.....	900	Horizontal, simple, direct-acting, 1 screw.	32		32	18	2 single-ended cylindrical, Scotch.	79.2
Yorktown...	Gunboat.....	1,740	Horizontal, triple expansion, 2 screws.	22	31	60	30	4 straight-way cylindrical.	220
Zafiro.....	Supply ship..	1,200	Compound.....					Scotch.....	

a Estimated

State naval vessels—Continued.

Total heating surface.	Trial speed.	Total maximum I. H. P.	Total bunker capacity.	Coal endurance at 10 knots per hour.	Total weight of machinery.	Present condition of machinery, as per last report.	Present service.
Sq. ft. 1,870	Knots. 21.15	850	Tons.	Knots	Tons.		
8,781	a 12	1,600	250	1,300	486.88	Good	Naval Academy.
16,912.4	a 17	8,610	830	2,900	692.64	do	Do.
7,548	a 26	3,000	70		a 80	do	Navy-yard, Norfolk.
7,548	a 26	3,000	70		a 80	74 per cent completed..	Topedo boat flotilla.
	a 16	a 2,200	300	3,800		Good	Columbian Iron Works Maryland. Training ship (landsmen).
19,748	30	8,300	185		a 189	98 per cent completed..	Maryland Steel Co., Maryland.
8,981	21.65	4,295	145	1,800	214.93	Needs extensive repairs.	Navy-yard, Boston, Mass.
2,524	12.71	1,118	235	4,000	109.67	Good	Asiatic Station.
68,000	19	23,000	1,900			3 per cent completed...	Newport News Co.
	a 16	a 1,250	170	3,000		Good	Special service.
	a 16.5	a 1,800	108	2,880		Fair	Navy-yard, Port Royal S. C.
68,000	a 22	a 23,000	a 2,000	a 4,800			Newport News Co.
2,508	12.88	1,080	226	4,000	115.61	Good	Station ship, Tutuila, Samoa.
19,748	a 30	8,300	185		a 189	96 per cent completed..	Maryland Steel Co., Maryland.
7,800	a 26.5	3,000	70	2,400	a 80	Good	Navy-yard, New York
4,800	15.08	1,894	280	2,200	185.15	do	Asiatic station.
5,260	24.82	2,000	42	1,200	50.82	do	Naval station, Newport, R. I.
21,356	17.17	12,609	1,200			do	Pacific Station.
19,748	a 30	8,300	185		a 189	93 per cent completed..	Maryland Steel Co., Maryland.
9,400	a 11.5	2,400	200		a 236	89 per cent completed..	Union Iron Works, California
12,035	a 14	a 3,800	1,200	7,000		Good	Navy yard, League Island, Pa.
1,872	a 14	a 750	170	2,640		do	Special service.
1,671	a 8.5	a 300	134			Unserviceable	Loaned to Naval Militia, Michigan.
8,092	16.14	3,392	400	3,624	264.82	Fair	Asiatic Station.
	10.5	850	175	2,880		Good	Do.

b Two low-pressure cylinders.

Tug boats—Continued.

Name.	Dis- place- ment.	I. H. P.	Speed.	Coal capac- ity.	Condition of machinery as per last report.	Present service.
	<i>Tons.</i>		<i>Knots.</i>	<i>Tons.</i>		
Pawtucket	225	450	12.2	30	Good	Navy-yard, Puget Sound.
Penacook	225	450	12	28	do	Naval station, Port Royal.
Piscataqua	681	2,000	16	328	do	Asiatic station.
Pontiac	401	425	10.5	45	do	Navy-yard, New York.
Potomac	677	2,000	16	200	do	Naval station, San Juan, P. R.
Powhatan	194	397	13	57	Fair	Navy-yard, New York.
Rapido	66				do	Asiatic station.
Samoset	225	450	12	30	do	Navy-yard, League Island.
Sebago	190		12	30	Underrepairs.	Naval station, Pensacola.
Sioux	155	290	10	45	Good	Navy-yard, Portsmouth, N. H.
Standish	450	340	10	80	do	Naval Academy.
Tecumseh	214	500	11	40	Fair	Navy-yard, Washington.
Traffic	280		10		Good	Navy-yard, New York.
Triton	212	300	13	45	do	Navy-yard, Washington.
Unadilla	345	500	12	65	do	Navy-yard, Mare Island.
Uncas	441	750	12	120	Underrepairs.	Navy-yard, Pensacola.
Vigilant	300	450	12	75	Good	Training station, Yerba Buena, Cal.
Waban	150		13	25	do	Habana, Cuba.
Wahnetah	192	300	11.5	35	do	Navy-yard, Norfolk.
Wompatuck	462	650	13	130	do	Asiatic station.

EXPERIMENTAL WORK.

NECESSITY FOR AN ENGINEERING LABORATORY AT THE NAVAL ACADEMY.

The recommendation made in my annual reports for the past two years relative to the establishment of an engineering experimental station at the Naval Academy is urgently renewed. The necessity for such a station has been recognized by the Bureau of Navigation, and its cooperation was cheerfully promised before a plan for its establishment was projected. When there was a separate Corps of Naval Engineers there were good reasons why such a station, like that of the War College, should be distinct from the Naval Academy, but with the amalgamation of the duties of the line and engineer officers, the Naval Academy became the logical place for the establishment of such a work.

The subject was carefully considered by your predecessor and indorsed by him in its entirety. The question has also been favorably considered by the Naval Committees of both the House and Senate. The measure only failed to become incorporated in the last naval appropriation bill by reason of the fact that the amendment of the Senate authorizing its establishment was stricken out by the conferees clearly upon a misunderstanding as to the purpose and necessity for such a laboratory in a modern navy.

In renewing my recommendation, it is pertinent that the Department should be informed of the exceeding regret of the shipbuilding interests of the country, and of the engineering profession at large, that the Congress failed to carry out a project that appealed so strongly to all who have given consideration to the subject. The German admiralty has such a laboratory at Charlottenburg, and those who have given careful study to the question of the advance of Germany as a maritime and naval power do not hesitate to ascribe the success in this direction as due in part to the unparalleled work conducted at this engineering station. The experimental work done at Charlottenburg

has prevented the shipbuilding interests of Germany from making serious mistakes along marine engineering lines. The maritime interests of the Empire, therefore, fully recognize the fact that the earnings of the various companies would have been considerably decreased if their engineering experts had not been accorded valuable information and advice by the technical and engineering experts of the University of Prussia.

The work at Charlottenburg has attracted such attention in Great Britain that the many friends of naval engineering in that country are calling upon the Admiralty for some similar institution which could do equally as good work for the navy of England.

The chief object and primary reason for making experiments and conducting original research is to increase the efficiency of the naval service by preventing the adoption on our ships of untried or doubtful expedients and devices. It is the aim of every promoter to force his wares upon the Government, but every executive department should have at its command a laboratory or station where extended tests could be made to determine the value and usefulness of every device submitted for adoption. Where there is unusual deterioration of material, the Government should carry on extended investigation as to the cause, and particularly is this necessary in matters relating to naval and military affairs. The establishment of such a station would thus cause the Government officials to anticipate improvements in means and material, and thus keep the ships more at sea instead of having them lie for long periods under repair at naval stations.

While the appliance to be experimented upon or the cause of deterioration to be investigated may appear unimportant to the layman, the professional expert realizes that the results are or may be of immeasurable benefit or disadvantage to the service at large. The pitting or rapid deterioration of boiler and condenser tubes may seem a very small matter to people on shore who can secure new tubes in a few hours, but such deterioration in ships that are thousands of miles from a source of supply becomes a matter of great importance.

Any naval service which is not kept in a state of efficiency has no reason for its existence. It is therefore the desire of naval officers as well as of the administrative officials of the Department to keep the ships ready for immediate service, and this can only be done by anticipating and providing for casualties and deterioration. The material that is now used in the construction of engines and boilers is of very high order. As in the case of a thoroughbred animal, its nature and qualities must be thoroughly understood, otherwise there is rapid decline. Desultory study upon the part of individuals is of course desirable, but systematic research and experiment can only bring about the best means of procuring good material and appliances and maintaining them in the highest possible state of efficiency.

A secondary reason for conducting experimental work at the Naval Academy rests in the fact that such a station can be utilized for the instruction of the midshipmen. The future estimate that will be placed upon engineering in the Navy will be determined by the prestige and influence that it will have at the Annapolis institution. If the midshipmen can be made to understand that the Naval Academy is a center of engineering influence, then technical instruction will command a respect that will make for future efficiency in the engine and fire rooms of the war ship. The time has now come when the Naval Academy should be primarily an engineering school, and this should be evident from the

various industrial plants, particularly when special work is going on. Two or three weeks' experience in connection with the ship model tank at the Washington Navy-Yard would afford information of value. On the official trials of special types of boats, like submarines, vessels fitted with steam turbines, and battle ships, the postgraduate class should serve as assistants to the inspection board. The benefit resulting from such travel and observation to junior officers of the line can not be overestimated.

The proposed system of postgraduate instruction is not a wide departure from existing usage. It is in existence in all technological schools and colleges. The Naval War College is a splendid development of the idea. The Army has found it necessary to establish infantry, cavalry, artillery, and engineer postgraduate schools, where officers can secure advanced instruction that the curriculum of West Point could not afford. The great industries of the country send employees abroad and appropriate special funds in order to qualify experts along particular lines.

The establishment of a postgraduate course at the Naval Academy need not necessarily cause the withdrawal of many officers from other duties. The successful installation of this work can probably best be secured by progressive development. As it will take time and money to perfect a course that will be of substantial benefit to the service, it may be advisable at first to start with few students, so that the proper lines of development can be ascertained.

THE MILITARY VALUE OF REPAIR SHIPS—SUCH AUXILIARIES NECESSARY FOR FLEETS OF MODERN BATTLE SHIPS.

The experience of the Spanish-American and South African wars showed the exceeding importance and necessity of auxiliary vessels in carrying on operations distant from a military base. In the conduct of operations around Manila and Santiago it was the indirect support afforded by the supply ships, repair facilities, and fleet of colliers, in keeping both matériel and personnel in a high state of efficiency that permitted the fighting vessels to maintain an effective blockade. In fact, the modern battle ship is greatly dependent upon the supply station or a fleet of auxiliaries for efficient operation, and its helplessness in this respect only becomes apparent when it is deprived of either of these supports. The official reports of the Spanish commanders testify to the estimate which our opponents placed upon the value of the auxiliary vessels in modern naval warfare.

The capture of Cavite gave Admiral Dewey a repair base within a short distance of his field of operation; and the records of this and other bureaus will show in part the character and extent of the work that was done at the shops of that distant station. While the Cavite plant may not have contained many modern machine tools, the resourceful naval engineers utilized the machines in a way that was remarkable, and it is regrettable that a complete and detailed history of the work done during the two years succeeding the battle of Manila is not a matter of official record. The exigencies of the service made it impossible for the constantly employed engineers to record the difficulties and trials undergone in establishing a successful repair base under the conditions existing.

There was sent to the Santiago blockading squadron the repair ship *Vulcan*, and, with the exception of the battle ship *Oregon*, there was not a vessel on the south side of Cuba that contributed indirectly more to the destruction of Admiral Cervera's squadron. The *Vulcan* rendered valuable service in keeping the battle ships near the entrance to Santiago, and if those men on the war vessels are regarded as direct participants who carried shell and powder to the guns, then the crew of the *Vulcan*, who worked day and night upon urgent repairs to the various ships, are entitled to an equal share of the rewards and honors of the victory achieved.

The work performed by the *Vulcan* has shown the necessity of providing a repair vessel for every large squadron of war ships. It should not be forgotten that the *Vulcan* was a converted merchantman, and that three months before she was ministering to the wants of the battle ships she had been employed in the coastwise passenger trade. In many respects she was not a suitable vessel, for her speed was too slow and her size too small to meet all the requirements demanded. It was, however, because there was pressing need for a vessel of such character that she proved so useful and so valuable. She performed more than was expected of her, and she served a great purpose in showing that a blockading squadron without a repair vessel would be seriously handicapped in doing efficient work.

The *Vulcan* justified her existence as much by what she taught as what she did. Her experience showed that a suitable repair ship could only be secured by designing one for the particular purpose. It will not do to depend upon utilizing some merchantman for this purpose. The vessel required should possess high decks, large hatches, considerable beam, and sufficient speed to keep in touch with the speediest of the battle ships. The repair vessel should be also an engineering supply and store ship. She should not only carry a large supply of fittings and stores, but particular care should be taken that these stores could be secured at short notice and with little trouble. It has been said that in the engineers' department alone there are several thousand distinct articles which should be kept in the storeroom. The call for a particular appliance may be an urgent one, and the impairment of some important appliance might thus be overcome by the procuring of some small fitting. Whatever supplies, therefore, are taken on board should be readily accessible, for next to being without the desired article the greatest disadvantage is not to be able to find that which has been carelessly stored.

There should not only be ample but good accommodations for the force of artisans employed. The work of these mechanics must at times be of a severe and continuous nature, and after going through such strain they should have rest, so as to fit them at sudden call for taking up more severe work. The experience with the *Vulcan* showed that special attention should be given to the details of installation of the forge and foundry department. On nearly every battle ship there are excellent lathes, planers, and drill presses. There is also a strong contingent of mechanics who can do some remarkable bench work if the occasion calls for such service. It is the casting or the rough forging which is often most required, and if the repair ship is fitted to do large work of this nature her value as an auxiliary will almost be immeasurable. It is the installation of the cupola and a large-sized forge which is the problem of the repair ship. Very important, also, must be the equipment of the pattern and coppersmith

shops. A good pattern maker can greatly assist the work of the foundryman, and such an artisan must have sufficient light and facilities for carrying on his work. There will be plenty of work for a copper-smith on a repair ship, and his duties can not be performed in an out-of-the-way corner. Any vessel fitted with a number of good machine tools can render effective service, but the inability to mold a moderate-size pattern, shape a heavy forging, or make a medium-sized copper pipe, will limit the capabilities of the repair ship.

It will be possible for a resourceful engineer by means of a sufficient number of crucibles to secure some surprising work in the shape of brass castings. It may also be within the province of such an expert to shape forgings so that they can be riveted or bolted together, thus overcoming casualties that seemed irreparable. Repairs of this nature, however, can only be installed where there are no limitations as to space. Since naval machinery is very compact, and as the stroke of the engine is short, it will often be impossible to resort to any such expedient, for the contracted spaces would not permit any patchwork repair to be effected. The use, therefore, of a cupola or a large forge might keep a powerful battle ship on the blockade, and thus prevent her being sent to a distant port for a special casting or forging. The necessity for a cupola and large forge being thus apparent, it will become imperative to provide large hatches and air ports, so that there can be eradicated the smoke and gases issuing from the furnaces of the forge and foundry compartments. The foundry as well as the copper shop gases may be dangerous, and provision must be made for removing them.

Under certain circumstances it may be found that it is as advisable to possess a repair ship for the month before and the month after the decisive day of conflict as it is to construct a battle ship for the few hours of warfare. Such a vessel could be made useful at all times. In time of peace the repair ship could be used for many important purposes in connection with the Navy. Such a vessel ought to be particularly adapted for the training of firemen, water tenders, and machinists, second class. It might be even used for experimental work, since the Navy will have to engage in experimentation if it is not to fall backwards in efficiency. This ship ought to be particularly adapted for conducting wireless-telegraphy experiments and liquid-fuel tests. In making experiments of such character, constant mechanical alterations are necessary, and the facilities and equipment of a repair vessel ought to be of great assistance in such research. With her mechanical installation she ought also to be adapted for training experts in torpedo work. She might also prove of much use as a tender for a torpedo-boat flotilla.

An auxiliary of this nature might be fitted up in time of peace for cruising purposes. One of these vessels could render effective service in both the Atlantic and Pacific waters by looking out for our interests at the Central and South American seaports. The ship assigned to duty in Pacific waters might even make an annual cruise to Bering Sea to render aid to the steam whalers whose machinery was in need of repairs. Our steam whaling commerce in those waters is absolutely without repair shop facilities, and it is just as consistent for the Navy to help them when their machinery is disabled as it is for the vessels of the Revenue Marine to assist the whalers in getting out of the ice pack. The value of the service rendered by the Revenue Marine can not be overestimated and there is no telling how much good could not be done by a repair ship in Arctic waters.

A properly designed repair vessel might serve a useful purpose in being assigned for duty at the Naval Academy. If such a ship had a good pneumatic, hydraulic, electric, and steam installation in addition to a well-equipped repair plant, she ought to make an extremely desirable vessel for the practice cruise of the cadets. While performing this duty some of the larger machines could be removed and the latest type of small guns mounted. There are other purposes to which the vessel could be applied, and which would be directly in keeping with naval work.

It is certain that if a suitable ship should be carefully designed for a repair ship she would turn out to be one of the most useful and all round desirable vessels in the Navy. It is therefore suggested that a board be appointed to consider the advisability of building a repair ship along these general lines.

THE PROBLEM OF THE WATER-TUBE BOILER—THE HOHENSTEIN BOILER TRIALS.

The present problem of the modern battle ship is not that of the gun and its mount, but the boiler and its installation. The gun is mounted in the most favorable position for care, operation, and inspection, and practically everything on board ship is subordinated to its efficient working. Since a large factor of safety is given to every part of the weapon that is subjected to shock, the gun can only be impaired by incompetence, neglect, or by chemical action of the explosive. Before it is placed in a turret or redoubt it is fully tested, but it is never put on board ship if there is a suspicion that it has been subject to undue strain.

The boiler, on the other hand, is placed beneath the protective deck just above the bilges and near the bunkers. It is installed in compartments that are avoided rather than sought by other than engineer officers. While a careful test is made of the structure before being placed in the vessel, it must necessarily be subjected, even before installation, to conditions that often impair its strength. In its construction many of the plates are subjected to the severest kind of flanging, and its efficient inspection is much more difficult than that of the gun. As there has been a progressive demand for increased steam pressures, the factors of safety used in designing a marine boiler are progressively becoming smaller. The conditions under which the boiler is operated necessarily cause some of the parts to be subjected to rapid corrosion, and only incessant care and attention can prevent the disablement or rupture of the structure.

The experience of the United States Navy with the boilers of the torpedo boats and torpedo-boat destroyers ought to afford some startling evidence as to the manner in which incompetent or untrained men can impair or destroy the efficiency of these steam generators. The agitation in Great Britain over the navy-boiler question ought also to convince naval administrators that the boiler problem is the naval problem of the hour.

In view of the British experience with the Belleville boiler, it is not surprising that the general public of that Empire regard the boiler commission, now in session, as the most important board appointed by the Admiralty during the past ten years. The membership of this board comprises distinguished experts within and without the naval service. This board has been in session nearly two years investigating

BUREAU OF STEAM ENGINEERING.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the Bureau of Steam Engineering, Navy Department.*

Detailed objects of expenditures, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
SALARIES.			
Chief clerk	\$2,000		
One clerk, class 3	1,600		
One clerk, class 2	1,400		
One clerk, class 1 (this clerk is employed in the office of the Assistant Secretary of the Navy)	1,200		
One assistant messenger	720		
Two laborers	1,320		
One draftsman, class 2	1,400		
One assistant draftsman, class 1	1,200		
One stenographer and typewriter, Class E	1,000		
Do	900		
		\$12,740	\$12,740

One clerk of class 2 is regularly employed in this Bureau and borne on the rolls of the Judge-Advocate-General's Office, \$1,400 per annum.

Statement in detail, showing the number of persons employed during the previous year and the rate of compensation of each, under appropriations "Increase of the Navy," or other general appropriations, as required by the legislative, executive, and judicial act approved Apr. 17, 1900, on the rolls of this Bureau Sept. 1, 1902.

	Per diem.	Per annum.	Total.
One clerk	\$4.00	\$1,252.00	\$1,252.00
One writer	3.52	1,101.76	1,101.76
Two writers, each	3.28	1,026.64	2,053.28
One special laborer	2.48	776.24	776.24
Three laborers, each	2.00	626.00	1,878.00
One carpenter	3.04	951.52	951.52
One chief draftsman	7.04	2,203.52	2,203.52
Two draftsmen, each	6.48	2,028.24	4,056.48
Three draftsmen, each	6.00	1,878.00	5,634.00
Three draftsmen, each	5.52	1,727.76	5,183.28
Two draftsmen, each	5.04	1,577.52	3,155.04
Total			28,245.12

None of the above employees are "below a fair standard of efficiency" for the ratings under which they are severally employed, with exception of two laborers, who are partially disqualified on account of physical disabilities.

STEAM MACHINERY

For completion, repairing, and preservation of machinery and boilers of naval vessels, including cost of new boilers; distilling, refrigerating, and auxiliary machinery; preservation of and small repairs to machinery and boilers in vessels in ordinary, receiving and training vessels; repair and care of machinery of yard tugs and launches (act July 1, 1902)	2,190,000	2,190,000
For purchase, handling, and preservation of all material and stores, purchase, fitting, repair, and preservation of machinery and tools in navy-yards and stations, and running yard engines (act July 1, 1902)	1,200,000	1,200,000
For incidental expenses for navy vessels, yards, and the Bureau, such as foreign postage, telegrams, advertising, freight, photographing, books, stationery, office furnishings, and instruments (act July 1, 1902)	15,000	15,000
	3,405,000	3,405,000

CIVIL ESTABLISHMENT

Navy-yard, Portsmouth, N. H. (act July 1, 1902).		
One clerk to department	\$1,200	
One messenger	600	
	1,800	1,800

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, etc.—Continued.

Detailed objects of expenditures, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
CIVIL ESTABLISHMENT—continued.			
Navy-yard, Boston, Mass. (act July 1, 1902):			
One clerk to department.....	\$1,400		\$1,400
Navy-yard, Brooklyn, N. Y. (act July 1, 1902):			
One clerk to department.....	\$1,400		
One writer.....	1,000		
One messenger.....	600		
Navy-yard, League Island, Pa. (act July 1, 1902):	3,000		3,000
One clerk to department.....	1,200		1,200
Navy-yard, Washington, D. C. (act July 1, 1902):			
One clerk to department.....	1,200		1,200
Navy-yard, Norfolk, Va. (act July 1, 1902):			
One clerk to department.....	1,300		
One messenger.....	600		
Naval station, Port Royal, S. C. (act July 1, 1902):	1,900		1,900
One clerk to department.....	1,200		1,200
Navy-yard, Pensacola, Fla. (act July 1, 1902):			
One writer.....	1,000		1,000
Navy-yard, Mare Island, Cal. (act July 1, 1902):			
One clerk to department.....	1,400		
One writer.....	1,000		
One messenger.....	600		
Navy-yard, Puget Sound, Wash. (act July 1, 1902):	3,000		3,000
One clerk to department.....	1,200		
One writer.....	1,000		
	2,200		2,200
		\$17,900	17,900
IMPROVEMENT OF PLANT.			
Navy-yard, Boston, Mass.:			
For electric cranes for foundry, boiler shop, and smithery, and for some large and powerful machine tools to complete equipment of shops (submitted).....	60,000	60,000	
Navy-yard, Norfolk, Va.:			
For cranes and heavy tools to equip the shops as altered (act July 1, 1902).....	25,000	25,000	25,000
Navy-yard, Charleston, S. C.:			
For complete equipment of shops already authorized (submitted).....	100,000	100,000	
United States Naval Academy, Annapolis, Md.:			
For building to be used as an experiment station and testing laboratory in the department of marine engineering and naval construction, the building to be 2 stories high and about 110 feet by 150 feet, and conform in design and construction with the new buildings now being erected at the Naval Academy (submitted).....	250,000		
For the complete equipment of this building with all the necessary appliances and apparatus as an experiment station and testing laboratory (submitted).....	150,000	400,000	

Respectfully submitted.

GEO. W. MELVILLE,
Engineer in Chief, U. S. Navy, Chief of Bureau.

The SECRETARY OF THE NAVY.

R E P O R T

OF

THE PAYMASTER-GENERAL OF THE NAVY,

CHIEF OF THE BUREAU OF SUPPLIES AND ACCOUNTS.

NAVY DEPARTMENT,
BUREAU OF SUPPLIES AND ACCOUNTS,
Washington, D. C., October 15, 1902.

SIR: I have the honor to present the report of the Paymaster-General of the Navy upon the operations of the Bureau of Supplies and Accounts for the fiscal year ending June 30, 1902, accompanied by the estimates for the coming year, prepared in accordance with the Department's instructions of July 3, 1902, and tabulated statements, as follows:

- A.—General financial statement.
- B.—Statement showing expenditures of money and material at shore stations and objects to which applied.
- C.—Statement showing operations of the naval supply fund to June 30, 1902, and the account of the naval supply fund for the fiscal year.
- D.—Statement showing the cost of maintenance of and improvements at navy-yards and stations.
- E.—Statement showing the value of real estate and chattels and machinery plant at the several navy-yards and stations.
- F.—Statement of payments through the Paymaster-General's Office on contract, open-purchase, and open-contract vouchers.
- G.—Statement showing the value of supplies on hand July 1, 1901, the receipts from purchase and other sources, the expenditures during the year, and the balance on hand June 30, 1902.
- H.—Statement of the value of stores received and expended on board ships in commission.
- I.—Statement showing cost of maintaining ships in commission.
- K.—Statement of public sales of Government property.
- L.—Exhibit showing volume and distribution of business under the Bureau at the various home stations.
- M.—Statement showing receipts and expenditures of provisions, contingent, clothing, and small stores, and balances on hand June 30, 1902. Also account of the clothing and small-stores fund for the fiscal year.
- N.—Schedule of proposals received.

These statements cover all transactions involving expenditures for the naval establishment, and show in principal items as follows:

Total credits, including balance from last fiscal year.....	\$139,583,685.43
Total debits.....	73,501,054.87
Leaving a balance of appropriations on June 30, 1902, of	66,082,630.56
Amount drawn from the Treasury	66,893,983.08
Expenditures on account of construction of new ships, including labor and material.....	14,392,921.77

Cost of repairs to ships and equipage, at home and abroad	\$5, 802, 101. 66
Cost of maintaining ships in commission, including pay of officers and men, together with the value of subsistence or commutation thereof, and incidental expenses and material expended.....	14, 331, 678. 78
Expenditures on account of the Marine Corps	2, 393, 830. 17
Cost to the Navy:	
Of the Light-House Establishment	82, 611. 10
Of the Fish Commission	70, 924. 01
For arming and equipping the naval militia of the several States, including material furnished	110, 574. 19
The deposits of savings by seamen during the year amount to.....	385, 059. 60
And the repayments.....	328, 426. 40
Total amount to the credit of the fund on June 30, 1902, was	601, 886. 16
Interest paid at 4 per cent per annum upon repayment amounted to.	18, 875. 55

THE PAY CORPS.

Through the constantly growing demands of the service, there is an increasing strain upon the number allowed to the corps by law. Serious embarrassment is felt in finding pay officers for ships in commission and for duty at the various naval stations. At this time of writing, of the 137 allowed by law, 73 are on sea duty; 56 are on shore duty, settling accounts or changing stations; 4 are unavailable for duty through sickness or other cogent reasons, and there are four vacancies. Much difficulty is felt in making the necessary reliefs of officers whose terms of duty at sea have expired, and it is impossible under existing conditions to grant the leave of absence that is customary upon an officer's return from a cruise. At this time there is not an officer off duty and available for a sudden call, such as may happen at any time through an unexpected casualty.

It will be seen from the data given above that the corps is without elasticity, there being no officers in excess of the several posts of duty that may be enumerated. Service on the Asiatic Station is particularly trying to the health, and the Department therefore regards two years as a cruise. Condemnations by medical survey are frequent, involving immediate measures for the relief of the officer condemned. This it is scarcely possible to accomplish in less than two months, owing to the distance. Meantime the best shift possible has to be made; sometimes duties are doubled, thus imposing additional strain and responsibility upon officers already sufficiently burdened; or sometimes on board ship the duties have to be taken up by another officer, not of the Pay Corps, until a relief can be duly provided. When it is remembered that besides the unexpected casualties as above suggested all officers on duty in the Philippines have under the Department's practice to be ordered home at the end of two years' service; that all pay officers are entitled by law to at least twenty days for the settlement of accounts; and that much time is required to effect a change of officers on distant stations; with these conditions in mind it is apparent that for efficient administration there must be a certain percentage of officers allowed in addition to the number of assignments that may be actually foreseen or counted as requiring each an officer.

At the present time we are not only without the margin necessary to provide for officers in transit, in hospital, or settling accounts, or on leave of absence, but we are without a sufficient number for the posts of duty now actually existing or within sight in the near future. There are at least thirty ships which within three months will need pay officers, either as reliefs or by reason of new commissioning. No

ships are expected to go out of commission within that time. The officers needed for duty afloat can be obtained only by taking them from duty ashore, from which they can not be spared without detriment to the public service. It must be remembered that while a pay officer is needed for each ship in commission (omitting torpedo boats and other small craft), the most important duties of the Pay Corps are ashore, in connection with the supply department of the Navy and on disbursing duty at navy-yards. In the present shortage of officers, those needed for duty afloat can be obtained only at the expense of the offices ashore, which must be depleted to their detriment. This involves either a doubling of duty, requiring one pay officer to take charge of two offices, or the detaching of assistants from the more important offices. Either course is tolerable only as a makeshift, and either one entails a loss in efficiency. The only available relief from this state of affairs has been through ordering retired officers to shore duty, and this has been done so far as practicable; nine of them being now in charge of offices ordinarily assigned to officers on the active list.

The condition here pointed out can have but one remedy, an increase of the corps. This was asked for last winter and a bill approved by the Department and submitted to Congress was passed by the Senate, but failed in the House. Since then our needs have become even more pronounced, and the Bureau urges a favorable recommendation on the subject by the Department.

NAVAL SUPPLY FUND.

The work accomplished by means of the supply fund has been greater in volume and variety during the past year than ever before. The fund now amounts to \$2,700,000, which is allotted to the several stations in sums proportioned to their relative importance, ranging from \$864,000 for the New York Navy-Yard to \$10,000 for that at Pensacola. The number of different items of supplies carried in stock at New York, as shown by the stock accounts, is over 7,500. Notwithstanding the large sum assigned to the fund and the great variety of supplies undertaken to be carried, yet, as will be shown hereinafter, the results are satisfactory neither to the Bureau nor to those who depend upon the system to furnish, as needed, the vast range of ordinary commercial commodities that are in constant demand. The needs of a navy-yard for purposes of construction of all kinds—ships' repairs, manufacture of equipage, new buildings, etc.—are ever increasing in quantity and variety; and, notwithstanding the earnest efforts of those concerned with administering the fund, it has proved impossible with the sum authorized by law to maintain stock in satisfactory variety and quantity.

The fund will fulfill its function only when purchases can be made in sufficiently large quantities at a time to avoid depletion at certain points. Of course, such depletion is to be expected in the supplies most commonly called for, and is now frequently experienced through the limitation imposed by the sum total of the fund. Careful watch must be kept upon the balance to its credit in the Treasury before authorizing new purchases, and this balance is a constant monitor to cut down or disallow estimates of stores needed at the various stations. For the reasons here outlined, I suggest that Congress be asked to increase the fund by \$500,000. This can be done without

swelling the year's appropriations by authorizing the transfer of that sum to the fund from the unexpended balance of the appropriation "Provisions, Navy, 1902." That appropriation has now to its credit in the Treasury about \$550,000, this surplus above the year's needs having arisen through a shortage in the enlistments authorized by law and through a gain due to the difference between the actual cost of the ration and its commutation value as fixed by law and used as the basis of the estimates. Ample provision will still be reserved for any items of adjustment or charge to the appropriation yet to be made in the books of the Treasury if the transfer of \$500,000 to the supply fund shall be authorized at the coming session, and, for the reasons given, I urge that this proposition be submitted to Congress with a favorable recommendation.

THE CLOTHING FACTORY.

The total value of garments, etc., made in the clothing factory during the fiscal year 1902 was \$360,942.95—the largest output in its history.

With the present plant about 40,000 garments can be turned over for issue. This quantity can be increased to 60,000 by adding more cutting machines, baling presses, etc., with an enlarged force.

THE NAVY RATION.

The naval appropriation act for the fiscal year 1903 provided for an increased ration for the Navy. The Bureau proceeded immediately to purchase the necessary stores and was able to obtain a sufficient supply for immediate needs at reasonable prices. These are now being distributed, and in a short time the whole enlisted force of the Navy will be subsisted in accordance with the new law.

STOREHOUSES.

The increased demand on the resources of this Bureau renders an enlargement of the storage plants at the navy-yards, Boston, Washington, Norfolk, Mare Island, and Puget Sound, imperative. These facilities are inadequate for the needs of the service, and unless relief in this respect is afforded at an early date, the efficiency of the Navy as a whole must suffer.

At Norfolk, Washington, and Boston the buildings are of an obsolete type, in which modern storehouse appliances can not be placed to advantage, and, because of the inflammable nature of the material used in their construction, are extremely liable to destruction by fire. At Puget Sound the storehouse is a small two-story nonfireproof building, with a capacity much below present requirements, and with the rapid development of this yard it is already inadequate as a general storehouse. As there is no other building that can be utilized for the housing of supplies, the situation is a cause for anxiety.

While a small section of the storehouse at Mare Island is of comparatively modern nonfireproof construction, a greater part is old, not well adapted to the purpose for which it is used, and not fireproof.

In addition to the improvements above suggested, buildings Nos. 33 and 31 (the clothing factory), in the New York Navy-Yard, should be fireproofed, and the storehouse at the naval station, San Juan, P. R., should be remodeled.

ADVERTISING IN THE DISTRICT OF COLUMBIA.

The act of January 21, 1881, prescribes that—

All advertising required by existing laws to be done in the District of Columbia by any of the Departments of the Government shall be given to one daily and one weekly newspaper of each of the two principal political parties, and to one daily and one weekly neutral newspaper.

Repeal of this law is recommended for the reason that newspapers as described are not necessarily published in the District, and that if published there is no certainty that all of the six are of the kind that circulates in the business world, or outside of the city of Washington. It is believed that the general statute governing advertising (sec. 3828, R. S.) is sufficient for, and should apply to, the District of Columbia.

SENATE BILLS ON THE CALENDAR.

Attention is invited to the following bills introduced in the Senate on the 9th of December last by the chairman of the Committee on Naval Affairs, and now on the Calendar, viz:

- S. 1105, to fix the compensation of pay clerks;
- S. 1107, limiting the liability of sureties on bonds of officers of the Navy;
- S. 1110, authorizing an inspector of accounts;
- S. 1111, amending section 3719, Revised Statutes, relative to guaranties on proposals for naval supplies.

These measures were submitted to Congress with the approval of the Department, and are all of importance, for reasons assigned in transmitting them to the naval committees; and it is earnestly recommended that they be urged for enactment at this winter's session.

Very respectfully,

A. S. KENNY,
Paymaster-General U. S. Navy.

The SECRETARY OF THE NAVY.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, by the Bureau of Supplies and Accounts, Navy Department.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
SALARIES.			
For a civilian assistant (in lieu of the chief clerk), who shall perform the duties of chief clerk, and in case of the death, resignation, sickness, or absence of both the Paymaster-General of the Navy and his assistant now provided for by law, unless otherwise directed by the President, as provided by section 179, Revised Statutes, such civilian assistant shall become the acting chief of the Bureau. (Increase of \$500 in salary submitted.) (Rev. Stat., p. 27, secs. 167-169; Rev. Stat., p. 70, sec. 416; act July 19, 1890, vol. 27, p. 243, sec. 1).....	\$2,500.00		
3 clerks class 4 (act Apr. 28, 1902).....	5,400.00		
6 clerks class 3 (same act).....	9,600.00		
2 clerks class 2 (same act).....	2,800.00		
2 stenographers, at \$1,400 each (same act).....	2,800.00		
11 clerks class 1 (same act).....	13,200.00		
5 clerks, at \$1,000 each (same act).....	5,000.00		
1 assistant messenger (same act).....	720.00		
1 messenger boy (same act).....	420.00		
1 laborer (same act).....	660.00		
		\$43,100.00	\$42,600.00
NOTE 1.—One clerk, class 4, employed in the Bureau is not borne on its rolls. NOTE 2.—There are borne on the rolls of this Bureau, but employed elsewhere, one clerk each classes 1, 2, and 3, one at \$1,000, and a messenger boy at \$420. NOTE 3.—In compliance with the act approved Apr. 17, 1900 (31 Stat. L., 117), the Bureau reports that there are regularly employed in this office, paid out of appropriation "Increase of the Navy," the following number of persons:			
1 at \$4 per diem=\$1,252.....	\$1,252.00		
7 at \$3.76 per diem=\$1,176.88 each.....	8,238.16		
6 at \$3.52 per diem=\$1,101.76 each.....	6,610.56		
9 at \$3.28 per diem=\$1,026.64 each.....	9,239.76		
5 at \$3.04 per diem=\$951.52 each.....	4,757.60		
5 at \$2.80 per diem=\$876.40 each.....	4,382.00		
1 at \$2.48 per diem=\$776.24.....	776.24		
4 at \$2 per diem=\$626 each.....	2,504.00		
Total (38 employees).....	37,760.32		
PROVISIONS, NAVY.			
For provisions and commuted rations for the seamen and marines, which commuted rations may be paid to caterers of messes, in cases of death or desertion, upon orders of the commanding officer; commuted rations for officers on sea duty (other than commissioned officers of the line, Medical and Pay Corps, and chief boatswains, chief gunners, chief sailmakers, chief carpenters) and naval cadets, and commuted rations stopped on account of sick in hospital and credited to the naval hospital fund; subsistence of officers and men unavoidably detained or absent from vessels to which attached under orders (during which subsistence rations to be stopped on board ship and no credit for commutation therefor to be given); labor in general storehouses and paymasters' offices in navy-yards, including naval stations maintained in island possessions under the control of the United States, and expenses in handling stores purchased under the naval supply fund; one chemist, at \$2,500 per annum, and two chemists, at \$2,000 each per annum (Rev. Stat., 733, secs. 3709, 3747; act May 12, 1879, vol. 21, p. 3, sec. 1; act July 1, 1902).....	3,500,000.00	3,500,000.00	3,500,000.00
CONTINGENT.			
For freight and express charges, fuel, books and blanks, stationery, advertising, furniture for general storehouses and pay offices in navy-yards; expenses of naval clothing factory and machinery for same, postage, telegrams, telephones, tolls, ferriages, yeoman's stores, safes, newspapers, ice, transportation of stores purchased under the naval supply fund, and other incidental expenses (act July 1, 1902).....	250,000.00	250,000.00	200,000.00

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the Bureau of Supplies and Accounts, Navy Department—Continued.*

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
CIVIL ESTABLISHMENT.			
Navy-yard, Portsmouth, N. H.:			
In general storehouses—			
2 bookkeepers, at \$1,200 each (act July 1, 1902)	\$2,400.00		
1 assistant bookkeeper, at \$720 (same act)	720.00		
1 bill clerk, at \$1,000 (same act)	1,000.00		
1 assistant clerk, at \$720 (same act)	720.00		
1 shipping and receiving clerk, at \$1,000 (same act)	1,000.00		
		\$5,840.00	
Navy-yard, Boston, Mass.:			
In general storehouses—			
1 bookkeeper, at \$1,017.25 (act July 1, 1902)	1,017.25		
1 shipping clerk, at \$1,000 (same act)	1,000.00		
1 receiving clerk, at \$1,000 (same act)	1,000.00		
1 bookkeeper, at \$1,200 (same act)	1,200.00		
In yard pay office—			
1 writer, at \$1,017.25 (same act)	1,017.25		
		5,234.50	
Navy-yard, New York, N. Y.:			
In office of board of inspection—			
1 writer, at \$900 (act July 1, 1902)	900.00		
In general storehouses—			
3 bookkeepers, at \$1,200 each (same act)	3,600.00		
1 assistant bookkeeper, at \$1,000 (same act)	1,000.00		
1 assistant bookkeeper, at \$720 (same act)	720.00		
2 receiving clerks, at \$4 each per diem (same act) ..	2,512.00		
1 assistant receiving clerk, at \$1,099 (same act)	1,099.00		
3 shipping clerks, at \$1,000 each (same act)	3,000.00		
1 bill clerk, at \$1,000 (same act)	1,000.00		
1 assistant bill clerk, at \$720 (same act)	720.00		
2 leading men, at \$2.50 each per diem (same act) ..	1,570.00		
5 pressmen, at \$2.76 each per diem (same act)	4,333.20		
1 box maker, at \$3 per diem (same act)	942.00		
1 engine tender, at \$3.26 per diem (same act)	1,023.64		
1 coffee roaster, at \$2.50 per diem (same act)	785.00		
1 fireman, at \$2 per diem (same act)	628.00		
1 messenger, at \$2.25 per diem (same act)	706.50		
1 writer, at \$1,000 (same act)	1,000.00		
1 store man, at \$900 (same act)	900.00		
1 principal clerk, provisions and clothing section, at \$1,400 (same act)	1,400.00		
1 principal clerk, supply-fund section, at \$1,400 (same act)	1,400.00		
1 cloth inspector, at \$4 per diem (same act)	1,256.00		
In yard pay office—			
1 writer, at \$1,017.25 (same act)	1,017.25		
1 messenger, at \$2.25 per diem (same act)	706.50		
		32,219.09	
Navy-yard, League Island, Pa.:			
In general storehouse—			
2 bookkeepers, at \$1,200 each (act July 1, 1902)	2,400.00		
1 assistant bookkeeper, at \$720 (same act)	720.00		
1 bill clerk, at \$1,000 (same act)	1,000.00		
1 receiving clerk, at \$1,000 (same act)	1,000.00		
1 shipping clerk, at \$1,000 (same act)	1,000.00		
In yard pay office—			
1 writer, at \$1,017.25 (same act)	1,017.25		
		7,137.25	
Navy-yard, Washington, D. C.:			
In general storehouse—			
1 bookkeeper, at \$1,200 (act July 1, 1902)	1,200.00		
1 clerk, at \$1,200 (same act)	1,200.00		
1 receiving clerk, at \$1,000 (same act)	1,000.00		
1 bill clerk, at \$1,000 (same act)	1,000.00		
1 shipping clerk, at \$1,000 (same act)	1,000.00		
In yard pay office—			
1 writer, at \$1,017.25 (same act)	1,017.25		
		6,417.25	
Naval Academy, Annapolis, Md.:			
In general storehouse—			
1 bookkeeper, at \$1,017.25 (act July 1, 1902)	1,017.25		
1 receiving and shipping clerk, at \$1,000 (same act) ..	1,000.00		
		2,017.25	

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, by the Bureau of Supplies and Accounts, Navy Department—Continued.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
CIVIL ESTABLISHMENT—continued.			
Naval station, Newport, R. I.:			
In general storehouse (training station)—			
1 clerk, at \$1,200 (act July 1, 1902).....	\$1,200.00		
In general storehouse (torpedo station)—			
1 clerk, at \$1,200 (same act).....	1,200.00	\$2,400.00	
Navy-yard, Mare Island, Cal.:			
In general storehouses—			
2 bookkeepers, at \$1,200 each (act July 1, 1902).....	2,400.00		
2 assistant bookkeepers, at \$720 each (same act)....	1,440.00		
1 receiving clerk, at \$1,000 (same act).....	1,000.00		
1 shipping clerk, at \$1,000 (same act).....	1,000.00		
1 bill clerk, at \$1,000 (same act).....	1,000.00		
1 clerk, at \$1,000 (same act).....	1,000.00		
1 assistant clerk, at \$1,000 (same act).....	1,000.00		
In yard pay office—			
1 writer, at \$1,017.25 (same act).....	1,017.25	9,857.25	
Navy-yard, Norfolk, Va.:			
In general storehouses—			
2 bookkeepers, at \$1,200 each (act July 1, 1902).....	2,400.00		
2 assistant bookkeepers, at \$1,017.25 each (same act)...	2,034.50		
1 bill clerk, at \$1,000 (same act).....	1,000.00		
1 assistant bill clerk, at \$720 (same act).....	720.00		
2 receiving clerks, at \$942 each (same act).....	1,884.00		
In yard pay office—			
1 writer, at \$1,017.25 (same act).....	1,017.25	9,055.75	
Naval station, Cavite, P. I.:			
In general storehouses—			
1 clerk, at \$1,600 (act July 1, 1902).....	1,600.00		
1 bookkeeper, at \$1,400 (same act).....	1,400.00		
3 assistant bookkeepers, at \$1,200 each (same act)...	3,600.00		
1 shipping and bill clerk, at \$1,200 (same act).....	1,200.00		
3 storekeepers, at \$1,000 each (same act).....	3,000.00		
1 receiving clerk, at \$1,200 (same act).....	1,200.00		
1 shipping clerk, at \$1,000 (same act).....	1,000.00		
1 assistant clerk, at \$1,000 (same act).....	1,000.00		
2 store men, at \$900 each (same act).....	1,800.00	15,800.00	
Navy-yard, Puget Sound, Wash.:			
In general storehouses—			
1 principal clerk, at \$1,400 (act July 1, 1902).....	1,400.00		
2 bookkeepers, at \$1,200 each (same act).....	2,400.00		
1 bill clerk, at \$1,000 (same act).....	1,000.00		
1 receiving clerk, at \$1,000 (same act).....	1,000.00		
1 shipping clerk, at \$1,000 (same act).....	1,000.00	6,800.00	
Naval station, Key West, Fla.:			
1 clerk, at \$1,200 (act July 1, 1902).....	1,200.00	1,200.00	
		\$103,978.34	103,932.28

^aThe increase of \$46.06 is not due to new items, but to one extra day for per diem employees at the New York Navy-yard, 1904 being a leap year.

STATEMENT A.

GENERAL NAVAL ACCOUNT FOR THE FISCAL YEAR ENDING JUNE 30, 1902.

Appropriations.

DEBITS.

Balance July 1, 1901		\$48,472,450.24
Appropriations for fiscal year 1902:		
Act of March 3, 1901	\$77,553,311.68	
Urgent deficiency act of February 14, 1902	5,692,300.00	
Urgent deficiency act of April 7, 1902	3,189.39	
		83,248,801.07
Appropriation "Naval Home, Philadelphia, Pa., 1902," by transfer from Navy pension fund		76,425.00
Naval supply fund, by transfer unexpended balance appropriation "Provisions, Navy, 1900"		200,000.00
Urgent deficiency act of February 14, 1902:		
Appropriations, "1901"	\$2,750.59	
Appropriations, "1900," and prior years	1,888.16	
Miscellaneous claims	9,398.70	
Judgments, bounty, destruction of enemy's vessels	50,000.00	
Reimbursement, Philippine insular funds for gunboats, etc	208,818.67	
		272,857.12
Navy pension fund		420,000.00
Navy pension fund, interest; unexpended balance appropriation "Naval Home, Philadelphia, Pa., 1900"		3,933.63
Indefinite appropriations, covered by warrant		84,420.21
Appropriation, "National defense, Navy," covered by warrant		24,999.72
Relief act May 27, 1902		701.25
Prize money, Spanish war		26,702.05
Navy pension fund (Spanish war)		26,439.23
Covered in to the credit of the following funds and appropriations:		
Clothing and small stores fund	\$885,105.18	
Naval hospital fund	202,222.33	
Pay of the Navy, deposit fund	440,014.20	
Ordnance material, proceeds of sales	82,609.44	
Pay, miscellaneous, 1900	9.47	
Pay, miscellaneous, 1901	60,059.32	
Pay, miscellaneous, 1902	8,014.32	
		1,678,034.26
Transfers between appropriations by Auditor's adjustments		5,047,921.65
Total		139,583,685.43

CREDITS.

Charged to account of appropriations:		
Navy Department requisitions	\$53,851,178.96	
Auditor's adjustments	17,629,875.00	
		\$70,981,053.96
Charged indefinite appropriations, Auditor's adjustments		84,420.21
Charged to "National defense, Navy:"		
Navy Department requisitions	24,320.00	
Auditor's adjustments	1,900.00	
		26,220.00
Less Auditor's credit adjustments and deposits	1,220.28	
		24,999.72
Navy pension fund		440,953.55
"Provisions, Navy, 1900," transfer to "Naval supply fund"		200,000.00
"Naval Home, Philadelphia, Pa., 1900," transfer to Navy pension fund, interest		3,933.63
Carried to surplus fund		1,765,693.80
Balance on hand June 30, 1902, to next account		66,082,630.56
Total		139,583,685.43

Balances June 30, 1902.

Annual appropriations:		
1902	\$11,876,280.59	
1901 and 1902	60,264.01	
1901	3,582,745.41	
1900	2,902,317.19	
1898 and 1899	4,173,755.76	
1898	99,179.90	
		\$22,694,542.86

Increase of the Navy:

Construction and machinery	\$19,468,105.79	
Equipment	814,999.89	
Armor and armament	1,230,191.23	
Submarine torpedo boat	84,254.72	
Gun plant, navy-yard, Washington, D. C.	44,492.21	
		\$21,642,043.84

Funds:

Pay of the Navy, deposit fund	463,270.16	
Navy pension fund (civil war)	441,101.20	
Navy pension fund (Spanish war)	351,040.07	
Prize money (civil war)	440,991.71	
Prize money (Spanish war)	39,783.42	
Naval hospital fund	223,880.06	
Naval supply fund	251,936.05	
Clothing and small stores fund	366,587.39	
Bounty, destruction of enemy's vessels (act July 7, 1884)	53,192.85	
Judgments, bounty, destruction of enemy's vessels	118,680.77	
Payment of Japanese award	28,492.18	
		2,778,955.86

Special appropriations:

Emergency fund, Navy Department, 1902	171,445.65	
Emergency fund, Navy Department, 1901 and 1902	25,768.85	
Emergency fund, Navy Department, 1901	189,326.22	
Reimbursement of Philippine insular funds for gunboats, etc., turned over to the Navy	208,819.67	
		595,360.39

Naval stations, coaling depots, dry docks, etc.:

Survey of Pearl Harbor, H. I.	7,820.30	
Survey for harbor, Island of Guam	2,922.62	
Naval station and coaling depot, Isthmus of Panama	200,000.00	
Dry dock, Havana, Cuba	76,935.88	
Dry dock, Charleston, S. C.	147,937.67	
Dredging, Dry Tortugas, Fla.	115,004.80	
Steel floating docks, Algiers, La.	30,382.97	
Four timber dry docks	2,117,967.87	
Depots for coal	1,311,742.16	
Buildings and grounds, Naval Academy	3,119,502.68	
Naval training station, Rhode Island, buildings	2,195.70	
Naval training station, California, buildings	226.20	
Torpedo station, buildings	730.20	
Naval hospital, Chelsea, Mass.	1,534.97	
Naval hospital, New York, N. Y.	367.77	
Naval hospital, Newport, R. I.	5,682.45	
Marine barracks and quarters, Annapolis, Md.	130,204.82	
Marine barracks and quarters, Algiers, La.	15,000.00	
Marine barracks, League Island, Pa.	2,836.18	
Marine barracks, Navy-yard, Brooklyn, N. Y.	16.00	
Building for offices Marine Corps, Washington, D. C.	32,223.98	
Naval magazine, New York Harbor	13,519.62	
Naval magazine, Fort Lafayette, N. Y.	92.74	
Naval magazine, Dover, N. J.	14,578.99	
Naval magazine, Fort Mifflin, Pa.	42,558.92	
Naval magazine, Norfolk, Va.	26,879.56	
		7,418,865.05

Improvements at navy-yards and stations:

Navy-yard, Portsmouth, N. H.	640,012.20	
Navy-yard, Boston, Mass.	1,339,551.87	
Navy-yard, Brooklyn, N. Y.	1,432,546.16	
Navy-yard, League Island, Pa.	1,412,783.50	
Navy-yard, Washington, D. C.	141,343.34	
Navy-yard, Norfolk, Va.	824,057.53	
Navy-yard, Pensacola, Fla.	43,441.87	
Navy-yard, Mare Island, Cal.	773,235.57	
Naval station, New London, Conn.	319.71	
Naval station, Port Royal, S. C.	416,305.86	
Naval station, Key West, Fla.	283,634.34	
Naval station, Algiers, La.	446,344.33	
Naval station, Charleston, S. C.	103,086.33	
Naval station, Puget Sound, Wash.	386,699.11	
Naval station, San Juan, P. R.	67,327.44	
Naval station, Tutuila, Samoa	222,029.45	
Naval Proving Ground, Indian Head, Md.	4,486.54	
Housing torpedo vessels	104,534.61	
Equipment plant, Philippine Islands	21,302.55	
Ordnance machinery, navy-yard, Mare Island, Cal.	24,000.00	
Ordnance machinery, navy-yard, League Island, Pa.	29,163.22	
Construction plants at navy-yards and stations	268,285.20	
Machinery plants at navy-yards and stations	441,850.45	
Machinery plant, Brooklyn, N. Y.	97,994.78	
		9,524,285.96

Miscellaneous appropriations:

Certified claims	3,090.64	
Recovering remains of officers and men and property, wreck of U. S. S. <i>Maine</i>	145,956.06	
Removal of remains of officers and men, destruction of U. S. S. <i>Maine</i>	3,031.23	
Bringing home remains of officers and men, Navy and Marine Corps, who die abroad	4,509.29	
Payments for damages, by collisions, etc., with naval vessels	662.57	

Miscellaneous appropriations—Continued.

Medals for officers and men of Navy and Marine Corps, war with Spain	\$23,948.65	
Water-boat equipment.....	5,938.10	
Coal barges, equipment.....	90,450.00	
Naval observatory, purchase of lands.....	21,886.84	
Ordnance material, proceeds of sales.....	147,731.67	
Arming and equipping naval militia.....	173,119.53	
Reserve guns for auxiliary cruisers.....	357,627.65	
Modern battery for the <i>Hartford</i>	125.05	
New battery for the <i>Baltimore</i>	175,000.00	
Rifle range, Blythe Island, Georgia.....	2,000.00	
Experiments with armor-piercing projectiles.....	11,585.57	
Reserve torpedoes and appliances.....	223,856.77	
Steam lighter, navy-yard, League Island, Pa.....	1,000.00	
Ammunition lighter, naval station, Puget Sound, Wash.....	18,000.00	
Experiments with liquid fuel.....	7,088.09	
Transportation of naval supplies.....	11,925.50	
Reimbursement to enlisted men, Marine Corps, for losses.....	43.34	
		\$1,428,576.60
Total balance, as above.....		66,082,630.56

Requisitions drawn by the Navy Department during the fiscal year ending June 30, 1902.

Charged to current appropriations	\$53,351,178.96
Charged to "National defense, Navy"	24,320.00
Charged to "General account of advances"	13,518,484.12
Total.....	66,893,983.08

Analysis of advances.

To pay bills of exchange drawn on the Department	\$680,494.18
To the fiscal agents, London, England	5,850,000.00
To pay-officers of ships in commission.....	6,615,800.00
To disbursing officers to pay vouchers.....	33,116,072.11
To disbursing officers to pay labor rolls	12,700,908.74
To disbursing officers, "Pay of the Navy," etc	5,453,522.57
To disbursing officers, "General account of advances".....	570,597.00
To disbursing officers of the Marine Corps.....	1,889,288.48
To recruiting officers and others.....	17,300.00
Total.....	66,893,983.08

Statement of receipts and payments for the fiscal year ending June 30, 1902.

RECEIPTS.

Balance of account July 1, 1901.....	\$46,440,519.52
Appropriations for fiscal year 1902 (see Appropriations).....	83,248,801.07
Appropriations for fiscal year 1901 (see Appropriations).....	2,750.59
Appropriations for fiscal year 1900 and prior years (see Appropriations)	1,888.16
Appropriations, indefinite.....	84,420.21
Appropriations, "National defense, Navy"	24,999.72
Appropriations, miscellaneous claims.....	9,398.70
Appropriation, relief act.....	701.25
Appropriation, judgments, bounty for destruction of enemy's vessels, Spanish war	50,000.00
Appropriation, reimbursement, Philippine insular funds for gunboats, etc.....	208,819.67
Interest on navy pension fund (3 per cent on \$14,000,000).....	420,000.00
Prize money, Spanish war.....	26,702.05
Navy pension fund, Spanish war.....	26,439.23
Cash from sales of supplies:	
Bureau of Equipment	\$27,919.15
Bureau of Ordnance.....	2,430.93
Bureau of Construction and Repair	8,331.36
Bureau of Supplies and Accounts	198,150.54
Fuel to officers of Navy and Marine Corps.....	15,701.41
	252,533.39
From War Department, account of supplies furnished, etc.:	
Provisions	593,710.23
Provisions Marine Corps.....	10,269.92
Clothing and small stores	1,540.49
Ordnance material, targets, etc	7,569.58
Repairs to transport <i>Egbert</i> (labor and supplies).....	22,222.32
Repairs to transport <i>Logan</i> (labor and supplies)	48,172.65
	683,485.19
From Treasury Department:	
Repairs to revenue cutters	20,331.77
Repairs to Fish-Commission steamer <i>Phalarope</i>	640.77
Refunded account pay, etc., Coast Survey vessels.....	30,652.16
	51,624.70
Repairs U. S. S. <i>Oncida</i> (District of Columbia naval militia)	3,129.28
Repairs Russian cruiser <i>Retvizan</i>	1,682.04

Repairs French cruiser <i>Protet</i>		\$3,085.22
Use Government cable, Key West, Fla		293.39
Labor at yards for private parties		1,738.85
Docking for private parties		1,618.32
Refunded, miscellaneous		30,358.30
Premiums on bills of exchange:		
Remittances to fiscal agents, London	\$2,069.07	
Sold by pay officers of ships	14,915.10	
Sold by pay officers of Marine Corps	709.22	
		17,693.39
Cash from sales of condemned stores:		
Navy-yard, Portsmouth, N. H	4,828.42	
Navy-yard, Boston, Mass	8,770.30	
Naval station, Newport, R. I	4,784.14	
Navy-yard, New York, N. Y	16,799.48	
Navy-yard, League Island, Pa	4,746.90	
Navy-yard, Washington, D. C	71,456.12	
Naval proving ground, Indian Head, Md	4,809.37	
Navy-yard, Norfolk, Va	17,846.93	
Navy-yard, Pensacola, Fla	1,754.13	
Navy-yard, Mare Island, Cal	424.19	
Naval station, Cavite, P. I	1,715.25	
Naval station, Havana, Cuba	125.00	
Erie, Pa	144.00	
U. S. S. <i>Glacier</i>	382.02	
Homing pigeons	182.22	
		138,768.47
Cash from sales of condemned vessels		83,620.38
Collected from contractors, account of penalties, etc		25,777.05
Rents, wharfage		3,626.86
Interest on daily balances, fiscal agents, London		10,925.67
Cash from purchase of discharge by seamen		2,972.30
Cash from sales, effects of deceased men and deserters		7,212.72
Undrawn pensions from pensioners at naval home		18,032.62
Total		131,883,618.31

PAYMENTS.

Secretary of the Interior, on account of navy pensions	\$364,528.55
To the surplus fund	1,765,693.80
To the United States Treasury, miscellaneous receipts	149,226.46
Expenses sales of condemned stores	3,082.10
For account of the Naval Establishment	67,196,368.76
Balance June 30, 1902, to next account	62,404,718.64
Total	131,883,618.31

Analysis of payments for account of Naval Establishment.

Approved money vouchers:		
Bureau of Yards and Docks	\$4,116,863.12	
Bureau of Equipment	3,393,864.98	
Bureau of Navigation	988,496.88	
Bureau of Ordnance	8,093,983.68	
Bureau of Construction and Repair	2,218,423.91	
Bureau of Steam Engineering	1,124,171.99	
Bureau of Supplies and Accounts	3,186,911.51	
Bureau of Medicine and Surgery	390,736.46	
Secretary's office	10,818,945.72	
Auditor's settlements	270,769.29	
		\$34,603,167.54
Labor rolls at navy-yards and naval stations:		
Bureau of Yards and Docks	1,618,144.31	
Bureau of Equipment	986,820.15	
Bureau of Navigation	268,050.19	
Bureau of Ordnance	2,326,228.41	
Bureau of Construction and Repairs	5,125,686.55	
Bureau of Steam Engineering	1,899,723.50	
Bureau of Supplies and Accounts	731,392.24	
Bureau of Medicine and Surgery	46,285.74	
		13,002,331.09
Pay rolls of navy-yards and naval stations:		
Pay of the Navy	3,925,838.34	
Provisions, Navy (commuted rations)	91,174.31	
		4,017,012.65
Payments by purchasing pay officers (allotments, mileage, etc.)		1,491,741.04
Public bills, ships in commission		2,778,792.90
Payments on rolls of ships in commission:		
Officers, crew, and marines for pay	7,062,950.45	
Officers, crew, and marines for commuted rations	1,257,783.00	
		8,320,733.45
Payments on account of the Marine Corps:		
By the Quartermaster's Department	916,185.11	
By the Paymaster's Department	1,254,832.14	
		2,171,017.25

BUREAU OF SUPPLIES AND ACCOUNTS.

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Direct payments:	
By the auditor for the Navy Department	\$624, 221. 47
By the fiscal agents, London, England	40, 475. 69
By the naval attachés abroad	30, 182. 20
Miscellaneous	116, 693. 48
	<u>\$811, 572. 84</u>
Total	67, 196, 368. 76

Statement of assets and liabilities.

ASSETS.

Appropriations, balance undrawn	\$66, 082, 630. 56
Advances to Pay Officers, in transit:	
Disbursing officers, for vouchers	\$139, 514. 20
Pay officers of ships in commission	65, 000. 00
Naval attachés abroad	2, 189. 93
	<u>206, 704. 13</u>
Transfers between pay officers, in transit	651, 304. 79
Balances in hand, as follows:	
Disbursing officers, "Pay of the Navy," etc.	160, 562. 88
Disbursing officers, "General account of advances"	417, 925. 57
Disbursing officers, for vouchers	150, 988. 13
Pay officers of navy-yards and naval stations for labor rolls.	189, 935. 83
Pay officers, ships in commission and foreign stations	1, 639, 782. 96
Fiscal agents, London, England	395, 868. 11
Naval attachés abroad	6, 270. 45
Disbursing officers of the Marine Corps	65, 541. 69
Other officers of the Navy acting as disbursing officers	48, 660. 86
	<u>3, 075, 536. 48</u>
Deposits in United States Treasury, not adjusted by Auditor	540, 551. 56
Repayments of deposits by seamen, not adjusted by Auditor	76, 432. 05
Total	<u>70, 633, 159. 57</u>

LIABILITIES.

General account of advances	\$6, 504, 675. 02
Pay of the Navy, deposit fund	463, 270. 16
Deposits by seamen, not adjusted by Auditor	215, 048. 05
Bills of exchange, unpaid	535, 378. 03
Due to State Department, consular fee account	22, 204. 29
Due account of labor for June, unpaid	124, 419. 56
Vouchers in hands of disbursing officers, unpaid	363, 445. 82
Balance as per account, "Receipts and payments"	62, 404, 718. 64
Total	<u>70, 633, 159. 57</u>

Statement of receipts and expenditures for fiscal year ending June 30, 1902.

DEBITS.

Due and unpaid on rolls July 1, 1901:	
Ships in commission	\$1, 302, 851. 66
Navy-yards and naval stations	96, 002. 66
	<u>\$1, 398, 854. 22</u>
Overpayments on rolls June 30, 1902:	
Ships in commission	16, 520. 42
Navy-yards and naval stations	2, 508. 57
	<u>19, 023. 99</u>
Overpayments, transferred accounts (in transit)	7, 207. 40
Overpayments, deserters' accounts	6, 881. 23
Advances to officers not reported checked on rolls	3, 925. 92
Allotments not reported checked on rolls	72, 866. 35
Apprehension of deserters	11, 727. 80
Minor credits on rolls:	
Refunded by seamen	2, 661. 63
Sales of deceased men's and deserters' effects	7, 608. 83
	<u>10, 270. 46</u>
Expenditures for fiscal year 1902	68, 438, 301. 84
Total	<u>69, 969, 059. 21</u>

CREDITS.

Due and unpaid on rolls June 30, 1902:		
Ships in commission.....	\$1,301,410.69	
Navy-yards and naval stations.....	121,034.49	
		\$1,422,445.18
Due and unpaid, transferred accounts.....		110,064.37
Due and unpaid, deceased men's accounts.....		17,740.46
Overpayments on rolls July 1, 1901:		
Ships in commission.....	16,710.12	
Navy-yards and naval stations.....	788.15	
		17,498.27
Credited to funds:		
Clothing and small stores fund.....	845,307.26	
Naval hospital fund.....	115,562.05	
		960,869.31
Clothing overdrawn by marines.....		7,023.42
Forfeited by seamen:		
Through courts-martial.....	92,762.51	
Through desertion.....	52,060.85	
Through unauthorized absence.....	22,132.80	
		166,956.16
Miscellaneous checkages on rolls:		
Auditor for the Navy Department.....	32,068.04	
Apprehension of deserters.....	13,460.88	
Purchase of discharge.....	18,434.29	
Outfits for landsmen.....	6,180.07	
		70,093.28
Balance, "Payments for account of the Naval Establishment".....		67,196,368.76
Total.....		69,969,059.21

Analysis of expenditures of money for the naval establishment during the fiscal year ending June 30, 1902.

Account of ships:		
Title A.—Cost of construction of ships.....	\$14,293,137.08	
Title D.—Repairs to vessels.....	4,008,548.75	
Title P.—Repairs to equipage of ships.....	50,470.10	
Title C.—Cost of commission.....	9,846,091.00	
		\$28,198,246.93
Account of navy-yards and naval stations:		
Title E.—Real estate and chattels.....	5,644,386.26	
Title F.—Machinery plant.....	496,049.08	
Title G.—General maintenance.....	6,078,268.70	
		12,218,704.04
Account of supplies purchased and labor in manufacture:		
Title X.—Supplies in store.....	14,028,439.66	
Title Y.—Supplies afloat.....	2,114,233.91	
Title Z.—Conversion account (manufacture).....	2,661,891.64	
		18,804,565.21
Account contingent sundries:		
Title H.—Personnel unassigned—		
Pay of officers and enlisted men retired.....	\$1,322,878.27	
Pay of officers, leave and waiting orders.....	120,636.78	
Pay and commuted rations, enlisted men on receiving ships.....	826,671.00	
Pay and commuted rations, apprentices at training stations.....	314,486.81	
		2,584,672.86
Title I.—Special duty (pay and commutation for quarters of officers under this title)—		
Traveling under orders.....	17,014.68	
Navy Department, chiefs of bureaus and officers on duty.....	238,441.24	
Attachés abroad.....	17,981.67	
Under instruction, War College.....	19,291.45	
Under instruction abroad.....	2,966.00	
Hydrographic Office.....	61,431.21	
Naval Dispensary and Museum of Hygiene.....	13,898.03	
Fish Commission.....	2,373.00	
Superintendence—State, War, and Navy building.....	3,975.99	
Recruiting offices.....	49,125.60	
Miscellaneous.....	95,029.42	
Board of inspection and survey.....	31,623.96	
Examining and retiring boards.....	68,027.19	
Inspection, construction of ships, as follows:		
Bath Iron Works.....	12,908.18	
Fore River Engine Co.....	9,229.72	
Cramp & Sons.....	29,445.00	
Newport News Shipbuilding Co.....	31,513.92	
Lewis Nixon (Crescent shipyard).....	15,127.96	
Gas Engine and Power Co.....	7,889.14	
Columbian Iron Works.....	7,456.15	
Neale & Levy.....	8,082.10	
Wm. R. Trigg Co.....	8,924.23	
Union Iron Works.....	20,358.55	
Moran Bros. & Co.....	4,251.46	
Hongkong, China.....	2,785.00	

BUREAU OF SUPPLIES AND ACCOUNTS.

Account contingent sundries—Continued.

Title I.—Special duty, etc.—Continued.

Inspection, ordnance, steel, etc., as follows:

Pittsburg, Pa	\$2,720.00
Homestead, Pa	3,540.00
Munhall, Pa	3,749.31
Hartford, Conn	6,408.00
Continental Iron Works	3,459.27
E. W. Bliss & Co.	6,533.52
American Steel Casting Co	4,146.50
Midvale Steel Co.	5,471.33
Pennsylvania Steel Co.	4,612.59
Bethlehem Steel Co.	2,759.71
Miscellaneous	15,262.66

Miscellaneous special duty, detailed, as follows:

School-ship <i>Enterprise</i>	8,742.77
School-ship <i>St. Marys</i>	8,571.11
Supervisor New York Harbor	4,173.10
Pan-American Exposition	950.07
Inspection of merchant vessels	542.87

\$863,367.66

Title L.—Light-House Establishment, pay of officers.....

82,611.10

Title M.—Fish Commission vessels—

Pay of officers and seamen	59,121.61
Commuted rations, officers and seamen	11,676.00
Miscellaneous expenses	32.41

70,830.02

Title N.—Models and experiments.....

79,728.15

Title O.—Naval Militia

51,842.79

Title V.—

Advertising	8,760.97
Freight	308,534.62
Transportation of men	161,494.63
Mileage and transportation of officers, 1900 and prior years	875.05
Mileage and transportation of officers, 1901	20,135.41
Mileage and transportation of officers, 1902	278,742.82
Miscellaneous expenses	1,218,850.83
Honorable-discharge gratuities to seamen	189,896.88
Outfits to apprentices and landsmen	212,071.12
Discount on bills of exchange, sold by pay officers of ships	66,546.54
Discount on bills of exchange, remittances to fiscal agents, London, England	9,357.57
Discount on bills of exchange, remittances to naval attachés	72.16
Discount on bills of exchange, sold by pay officers of the Marine Corps	200.00
Loss on depreciation of silver	31,256.42
Interest paid on repayments of deposits	18,875.55
Commissions paid to fiscal agents, London, England	29,548.69
Expenses, dispatch agent, London	1,569.43
Expenses, naval attachés abroad	15,512.18
Expenses, students abroad	113.19
Expenses, dispatch agent, Panama	141.00
Expenses, naval hospital, Sitka, Alaska	1,309.57
Courts-martial gratuities	2,294.10

2,576,158.73

Title W.—Repairs to supplies in store.....

10,040.63

Total, contingent sundries.....

\$6,319,251.94

Auditors' certificates and certified claims:

Pay of the Navy—

1898 and 1899	5,703.20
1900	8,518.90
1901	33,568.05
1902	33,299.02
Certified claims	1,165.81

82,254.98

Heirs of deceased officers and seamen.....

17,914.80

Miscellaneous claims

120.26

Prize money (civil war)

424.54

Prize money (Spanish war)

29,947.04

Destruction of clothing and bedding for sanitary reasons

30.19

Extra pay of officers and men, Mexican war

249.00

Extra pay of officers and men for service, Pacific Ocean

94.20

Indemnity for lost clothing

3,588.33

Bounty for destruction of enemies' vessels (civil war)

138.31

Judgments, bounty for destruction of enemies' vessels (Spanish war)

366,859.43

Enlistment bounties to seamen

412.60

Relief of sufferers by destruction of U. S. S. *Maine*

540.00

Payment to Catherine Burns (act May 27, 1902)

701.25

Payment of Japanese award

428.62

Total Auditor's certificates.....

503,703.55

Expenditures for account of the Marine Corps.....

2,393,830.17

Total expenditures for fiscal year 1902.....

68,438,301.84

STATEMENT B.

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902.

TITLE A.—COST OF CONSTRUCTION OF SHIPS.

	Money vouchers.	Labor.	Material.	Total.
Alabama.....	\$52,225.54	\$1,307.40	\$136.12	\$53,669.06
Adder.....	30,600.00	531.59		31,131.59
Arkansas.....	393,323.53	13,896.99	3,807.54	411,028.06
Bailey.....	18,203.97	1,385.80	1,500.00	21,089.77
Bagley.....	31,134.60	720.40	3.15	31,858.15
Barney.....	31,154.60	138.70	3.21	31,276.51
Biddle.....	31,142.60	280.41	3.15	31,426.16
Bainbridge.....	11,301.50	3,061.11		44,965.61
Barry.....	66,424.50	3,187.80		69,612.30
Blakely.....	20,722.92	1,397.98		22,120.90
Chattanooga.....	329,353.29	7,435.95	444.70	337,233.94
Cleveland.....	285,953.50	11,477.95	2,838.74	300,270.19
California.....	228,000.00	3,551.83	75.25	231,627.08
Colorado.....	856,859.56	8,844.71	58.68	865,762.75
Charleston.....	82,200.00	7,521.95		89,721.95
Chauncey.....	41,304.50	3,163.80		44,468.30
Denver.....	344,986.20	10,261.22	6,091.70	361,339.12
Des Moines.....	383,400.00	17,222.51	1,835.58	402,458.09
Dale.....	64,356.46	3,732.21		68,288.67
Decatur.....	52,253.58	4,186.67	46.19	56,486.44
De Long.....	20,722.92	1,702.52		22,475.44
Florida.....	308,560.27	11,136.62	7,489.54	327,186.43
Goldsborough.....		15,079.29	2,733.62	17,812.91
Galveston.....	323,506.00	9,025.10	5,643.41	338,173.51
Georgia.....	323,100.00	10,555.97		333,655.97
Grampus.....	30,600.00	1,406.00		32,006.00
Hopkins.....	66,480.00	1,844.32	202.54	71,526.86
Hull.....	26,190.00	4,764.56	200.13	31,154.69
Illinois.....	624,061.50	24,696.69	15,841.61	664,599.80
Kearsarge.....		73.13	111.58	184.71
Kentucky.....		61.04	111.60	172.64
Lawrence.....	39,651.00	2,458.29		42,109.29
Maine.....	1,921,231.81	50,964.04	4,614.87	1,976,810.72
Missouri.....	1,590,653.66	57,664.76	12,630.72	1,590,949.04
Maryland.....	644,728.98	8,659.74	75.26	653,464.98
Milwaukee.....	84,750.00	1,826.69		89,576.69
Moccasin.....	30,600.00	534.59		31,134.59
Macdonough.....	39,654.00	2,458.29		42,112.29
Nebraska.....	224,016.00	12,217.19		236,233.19
New Jersey.....	204,300.00	6,301.77		210,601.77
Nicholson.....	37,507.65	2,213.82	1.55	39,723.02
Nevada.....	170,431.60	12,706.26	8,097.42	191,235.28
Ohio.....	922,458.48	47,475.65	6,849.44	976,783.57
O'Brien.....	22,657.65	2,217.21	1.55	24,876.41
Plunger.....	110,110.32	1,004.53		111,114.85
Pennsylvania.....	722,998.88	8,740.96	75.21	731,815.05
Perry.....	39,150.00	2,319.51		41,469.51
Piehle.....	39,150.00	2,279.33		41,429.33
Pike.....	30,200.00	1,310.34		31,510.34
Porpoise.....	30,500.00	534.59		31,034.59
Paul Jones.....		2,652.97		2,652.97
Rhode Island.....	204,300.00	6,366.49		210,666.49
Stringham.....		361.96		361.96
Stewart.....	76,140.00	2,097.42	2,481.89	80,719.31
South Dakota.....	112,500.00	4,165.33	75.28	116,730.61
St. Louis.....	82,200.00	5,370.01		87,570.01
Stockton.....	4,735.45	1,189.69	66.31	5,991.45
Sturbrick.....	13,112.83	1,907.76	112.60	21,133.19
Shark.....	30,600.00	534.57		31,134.57
Tacoma.....	187,767.42	6,552.20	95.20	194,414.91
Thornton.....	23,935.83	707.13		24,642.96
Tingey.....		4,120.59	244.00	4,364.69
Truxtun.....	23,752.00	3,439.69		29,182.69
Virginia.....	107,500.00	8,351.28		116,051.28
Washington.....	118,485.89	25,620.07	7,248.27	151,354.23
Wyandott.....	2,849.48	15,279.74	7,633.82	25,763.04
Wicks.....	28,480.00	3,458.92	228.02	32,166.94
West Virginia.....	759,219.74	7,280.62	75.24	766,575.60
Worden.....	25,772.00	3,272.36		29,044.36
Whipple.....	23,752.00	3,397.31		29,149.31
Total.....	13,769,722.92	23,400.17	99,784.69	14,092,921.77

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE D.—REPAIRS TO VESSELS.

	Money vouchers.	Labor.	Material.	Total.
Ajax.....	\$136.41	\$35,190.56	\$10,895.85	\$46,222.82
Accomac.....		40.08		40.08
Active.....		7,652.96	3,229.16	10,882.12
Adams.....		18,639.45	7,076.94	25,716.39
Alabama.....	16.00	24,879.85	13,967.78	38,863.63
Albany.....	1,291.65			1,291.65
Albay.....	127.00	8,039.00	4,190.52	12,356.52
Alert.....	157.50	3,030.77	921.95	4,110.22
Alexander.....	1,248.12	8,197.32	2,205.89	11,651.33
Alice.....		6,829.31	3,629.63	10,508.94
Alliance.....		2,984.30	1,207.51	4,191.81
Alvarado.....		184.61	78.04	262.65
Amphitrite.....	859.71	56,057.27	22,677.23	79,594.21
Annapolis.....		573.31	536.93	1,110.24
Apache.....		1,976.19	1,058.51	3,034.70
Arayat.....	2,053.88	845.36	419.66	3,318.90
Arethusa.....	3,008.80	1,524.82	122.30	4,655.92
Atlanta.....	1,092.78			1,092.78
Bagley.....		1,810.10	503.42	2,313.52
Bailey.....		1,635.26	503.18	2,138.44
Baltimore.....	696.00	186,726.59	109,570.75	296,993.34
Bancroft.....		12,154.32	2,676.95	14,831.27
Barney.....	3.60	1,651.95	595.94	2,251.49
Basco.....		1,410.44	1,383.87	2,794.31
Bennington.....		74,157.50	37,596.84	111,754.34
Biddle.....	12.00	1,456.70	589.83	2,058.53
Boston.....	727.65	199,371.12	63,800.71	263,899.48
Brooklyn.....	10,688.51	12,459.59	5,500.03	28,708.13
Brutus.....	1,261.21	48,685.72	16,723.83	66,670.76
Buffalo.....		13,289.03	6,328.74	19,617.77
Cesar.....		4,785.86	1,444.57	6,230.43
Calamianes.....		6,942.89	5,522.29	12,465.18
Callao.....		11,818.67	10,095.24	21,913.91
Castine.....		25,144.29	9,292.02	34,436.31
Catskill.....		2,071.13	487.38	2,558.51
Celtic.....	9,240.55	1,485.18	318.55	11,044.28
Chesapeake.....		8,471.12	1,912.42	10,383.54
Chicago.....	4,827.89	109.82	120.27	5,057.98
Chickasaw.....		6,014.38	2,335.05	8,349.43
Choctaw.....	200.00			200.00
Cincinnati.....	9,546.21	44,939.60	19,028.88	73,514.69
Columbia.....		17,292.04	7,884.99	25,177.03
Concord.....		21,931.32	12,912.94	34,844.86
Constellation.....		3,279.08	6.05	3,285.13
Constitution.....	810.00	1,264.30	679.65	2,753.95
Craven.....		5,511.92	1,207.70	6,719.62
Culgoa.....	8,065.32	97,723.40	31,060.80	136,849.52
Cushing.....		1,235.56	211.77	1,447.33
Dahlgren.....		3,920.12	1,242.16	5,162.28
Dale.....	1,100.16			1,100.16
Davis.....		2,093.13	1,048.77	3,141.90
Decatur.....		1,885.95	333.88	2,219.83
Detroit.....	700.00	135,065.87	37,832.11	173,597.98
Dixie.....		1,495.30	940.49	2,435.79
Dolphin.....		9,739.91	2,407.12	12,147.03
Don Juan de Austria.....	6,283.64	1,104.91	367.62	7,756.17
Du Pont.....		6,855.51	3,503.65	10,359.16
Eagle.....	63.75	5,328.57	1,303.23	6,695.55
El Cano.....	5,502.99	44,741.53	23,127.60	73,372.12
Elfrida.....		203.29	85.56	288.85
Eriesson.....		2,519.80	1,741.04	4,260.84
Essex.....		14,615.76	3,760.71	18,376.47
Farragut.....		4,712.42	1,293.67	6,006.09
Foote.....		1,219.64	248.43	1,468.07
Fortune.....		6,176.43	1,626.57	7,803.00
Fox.....		1,588.15	1,102.11	2,690.26
Franklin.....		557.11	254.50	811.61
Frolic.....	1,316.50	1,369.70	418.20	3,104.40
Gardoqui.....		783.37	265.88	1,049.25
General Alava.....	4,216.63	9,470.23	9,429.82	23,116.68
Glacier.....	11,849.10	201.78	726.46	12,777.34
Gloucester.....		414.86	205.40	620.26
Goldsborough.....		251.88	334.36	586.24
Gwin.....		2,385.59	950.04	3,335.63
Hannibal.....		1,697.12	1,022.41	2,722.41
Hartford.....		13,199.31	4,313.12	17,512.43
Helena.....	2,469.16	8.00		2,477.16
Hercules.....		4,970.00	1,176.35	6,146.41
Hist.....	295.00	35.09		330.09

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE D.—REPAIRS TO VESSELS—Continued.

	Money vouchers.	Labor.	Material.	Total.
Holland.....	\$229.85	\$613.20	\$105.66	\$948.71
Hornet.....	675.00			675.00
Illinois.....	2,434.65	3,659.38	3,745.85	9,839.88
Independence.....		1,250.23	635.39	1,885.62
Indiana.....	4,551.36	18,808.41	10,708.39	34,068.16
Iowa.....	5,176.21	806.31	490.51	6,473.03
Iris.....	15,271.59	4,774.02	3,187.54	23,233.15
Iroquois.....	828.28			828.28
Isla de Cuba.....	17,327.22	1,529.42	15.54	18,872.18
Isla de Luzon.....	1,448.25	143.07	2,327.23	3,918.55
Justin.....	6,308.03	234.89	272.33	6,815.25
Katahdin.....		7,952.47	1,599.72	9,552.19
Kearsarge.....	592.43	13,063.73	7,031.36	20,687.52
Kentucky.....	11,503.16	1,579.50	1,454.01	14,536.67
Lancaster.....		8,171.29	1,139.38	4,310.67
Lebanon.....		24,333.98	5,326.90	29,660.88
Leonidas.....		2,690.07	899.24	3,589.31
Leyden.....		1,781.51	1,908.21	3,689.72
Leyte.....		4,704.38	1,850.95	6,555.33
Machias.....	226.80	5,636.72	3,502.77	9,366.29
Mackenzie.....		253.82	97.27	351.09
Mahopac.....			184.43	184.43
Manhattan.....		773.03	219.18	992.21
Manila.....	5,006.64	1,530.30	1,457.48	7,994.42
Manileno.....		318.51	171.75	490.26
Mindanao.....		3,853.36	3,329.31	7,182.67
Manly.....		1,913.58	222.30	2,135.88
Marblehead.....		57,757.37	21,457.86	79,215.23
Marcellus.....		27,123.87	7,325.55	34,449.42
Marietta.....		27,795.62	9,654.40	37,449.92
Marivales.....		2,161.68	764.85	2,926.53
Massachusetts.....		34,462.39	18,127.19	52,589.58
Massasoit.....	56.25	108.72		164.97
Mayflower.....	20.88	25,717.70	7,558.75	33,297.33
McKee.....		162.28		162.28
Miantonomoh.....	252.00	6,981.31	1,608.24	8,841.55
Michigan.....	3,449.78			3,449.78
Mindoro.....		2,268.42	352.26	2,620.68
Minneapolis.....	20.00	40,117.01	13,293.97	53,430.98
Minnesota.....	10.00	12.46		22.46
Mohawk.....		2,128.27	501.04	2,629.31
Mohican.....		6,905.44	2,506.20	9,411.64
Monadnock.....	11,390.56	155.32	89.67	11,635.55
Monocacy.....	121.23			121.23
Monongahela.....	100.00	10,370.23	4,183.98	14,654.21
Monterey.....	12,161.57	532.13	125.08	12,818.78
Montgomery.....	328.00	61,144.58	33,373.04	94,845.62
Morris.....		2,618.95	2,816.26	6,435.21
Nanshan.....	3,624.36	224.65	70.70	3,919.71
Narketta.....		3,540.17	638.65	4,178.82
Nashville.....	7,520.63	15.56	4.27	7,540.46
Nero.....		5,098.61	2,192.91	7,291.52
Newark.....	780.00	126,486.93	55,781.31	183,048.24
New Orleans.....	6,294.40	85.32	60.04	6,439.76
New York.....	13,933.00	317.49	402.64	14,653.13
Newport.....		366.97		366.97
Nezineot.....		1,018.69	196.67	1,215.36
Nina.....		3,785.37	722.85	4,508.22
Nipsic.....		768.53	516.08	1,284.61
Olympia.....	31,666.30	154,263.97	71,575.24	257,505.51
Oneida.....		152.58	46.91	199.49
Oregon.....	757.83	186,386.01	104,786.70	291,930.54
Osceola.....		1,830.43	460.04	2,290.47
Pampanga.....		438.60	204.74	643.34
Panay.....		1,557.39	1,076.71	2,634.10
Panther.....	1,451.00	123,551.03	43,635.96	168,637.99
Paragua.....	2,029.83	540.89	224.39	2,795.11
Pawnee.....		1,433.86	403.70	1,837.56
Pawtucket.....		1,603.81	1,522.54	3,126.35
Pemucook.....	130.60	528.13	483.02	1,141.75
Pensacola.....	998.52			998.52
Peoria.....		1,576.68	515.61	2,092.29
Petrel.....		8,119.62	4,674.92	12,794.54
Philadelphia.....		11,175.99	6,155.97	17,331.96
Pinta.....	1,620.78			1,620.78
Piscataqua.....	2,327.81	2,474.90	3,946.59	8,749.33
Pompey.....	399.06	1,205.59	505.38	2,110.03
Pontiac.....		1,437.09	467.62	1,904.71
Porter.....		1,125.20	1,181.13	5,306.33
Potomac.....	522.00	6,377.02	2,093.21	8,992.23

BUREAU OF SUPPLIES AND ACCOUNTS.

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE D.—REPAIRS TO VESSELS—Continued.

	Money vouchers.	Labor.	Material.	Total.
Powhatan.....	\$33.60	\$6,766.73	\$2,958.10	\$9,758.43
Prairie.....	8,160.65	179,327.53	58,848.69	246,336.87
Princeton.....	11,343.63	126.61	60.24	11,530.48
Puritan.....		30,555.37	9,790.79	40,346.16
Quiros.....	4,534.50	2,701.31	2,723.90	9,959.71
Rainbow.....	2,368.19	131,616.72	57,940.59	191,925.50
Raleigh.....	25.00	66,243.56	125,630.55	191,899.11
Ranger.....	77.50	5,907.76	1,807.29	7,792.55
Rapido.....		405.71	184.81	590.52
Reina Mercedes.....		3,466.26	587.30	4,053.56
Restless.....		14,371.13	4,697.36	19,068.49
Richmond.....		4,890.80	2,087.32	6,978.12
Rodgers.....		3,747.21	1,058.38	4,805.59
Rowan.....		510.99	18.52	529.51
Samar.....		18,547.07	12,443.19	30,990.26
Sandoval.....		222.57	141.76	364.33
San Francisco.....		188,041.03	83,805.43	271,846.46
Saturn.....	9,383.48	173.86	46.11	9,603.45
Scorpion.....		20,779.87	8,655.27	29,435.14
Sebago.....		2,750.35	2,445.25	5,195.60
Shearwater.....		357.77	68.17	425.94
Shubrick.....		2,216.46	624.72	2,841.18
Sioux.....		4,538.07	503.14	5,041.21
Siren.....		1,589.73	474.07	2,063.80
Solace.....		51,291.81	20,958.47	72,250.28
Somers.....		1,405.37	272.91	1,678.28
Southery.....		1,470.54	914.70	2,385.24
Standish.....		343.72	117.50	461.22
Sterling.....	755.00	2,070.32	1,003.38	3,833.70
Stockton.....		1,715.81	503.10	2,218.91
Stranger.....	360.00			360.00
Stringham.....		33.12		33.12
Supply.....		221,907.20	124,731.18	346,638.38
Sylph.....	3.00	6,490.02	2,590.93	9,083.95
Sylvia.....	235.36			235.36
Talbot.....		205.19	54.22	259.41
Tecumseh.....		1,356.22	523.20	1,879.42
Terror.....		22,391.92	6,216.12	28,608.04
Texas.....		145,896.91	63,357.66	209,254.57
Thornton.....		919.13	197.53	1,116.66
Topeka.....		4,609.38	2,293.83	6,903.21
Traffic.....		1,449.61	287.81	1,737.42
Triton.....		2,105.78	597.82	2,703.60
Unadilla.....		1,947.45	1,591.68	3,539.13
Uneas.....	482.85	3,839.72	1,451.74	5,774.31
Urdaneta.....		3,278.03	406.38	3,684.41
Vermont.....		1,415.21	587.33	2,002.54
Vesuvius.....		431.60	373.97	805.57
Vicksburg.....	3,477.43	1,755.66	918.27	6,151.36
Vigilant.....		13,710.67	8,204.16	21,914.83
Villalobos.....	3,217.53	1,585.00	1,770.39	6,572.92
Vixen.....	640.00	8,702.90	3,191.37	12,534.27
Waban.....	1,568.10			1,568.10
Wabash.....		1,519.78	398.22	1,918.00
Wahneta.....		4,997.32	1,609.56	6,606.88
Wasp.....		4,900.02	804.60	5,704.62
Wheeling.....	236.00	60,069.14	19,675.28	80,000.42
Wilmington.....	2,674.16	1.00		2,678.16
Wompatuck.....	1,891.81	1,896.89	1,698.82	5,490.52
Winslow.....	115.00	609.00	192.82	916.82
Wisconsin.....	513.02	22,437.93	8,439.66	31,390.61
Yankton.....		12,768.03	14,123.85	26,891.88
Yankee.....		39,369.35	50,554.45	89,923.80
Yorktown.....	4,570.14	1,154.54	1,031.92	6,756.60
Zafiro.....	8,699.56	2,366.90	2,313.14	13,379.60
Total.....	328,802.12	3,679,746.63	1,725,618.16	5,734,166.91

BUREAU OF SUPPLIES AND ACCOUNTS.

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE F.—MACHINERY PLANT—Continued.

	Money vouchers.	Labor.	Material.	Total.
Naval station, Mare Island, Cal.:				
Bureau of Equipment			\$18,371.14	\$18,371.14
Bureau of Ordnance		\$12.00		12.00
Bureau of Construction and Repair	\$5,810.00	47,782.04	131,069.97	184,162.01
Bureau of Steam Engineering		129.82		129.82
Naval station, Puget Sound, Wash.:				
Bureau of Equipment			5,353.03	5,353.03
Bureau of Construction and Repair		19,608.28	51,365.63	70,973.91
Bureau of Steam Engineering		12,789.43	31,767.65	44,557.08
Naval station, San Juan, P. R.:				
Bureau of Yards and Docks			3,154.50	3,154.50
Naval station, Guam, L. I.:				
Bureau of Yards and Docks			75.38	75.38
Naval station, Cavite, P. I.:				
Bureau of Equipment		3,585.62	12,327.99	15,913.61
Bureau of Construction and Repair		8,035.14	46,183.22	54,218.36
Bureau of Steam Engineering		502.53	467.60	970.13
Bureau of Ordnance			33.58	33.58
Total.....	151,668.49	344,380.59	994,225.23	1,490,274.36

TITLE G.—GENERAL MAINTENANCE.

Naval station, Portsmouth, N. H.....	\$3,759.42	\$171,742.50	\$78,644.46	\$254,146.38
Naval station, Boston, Mass.....	13,133.82	358,806.34	113,361.73	485,301.89
Torpedo station, Newport, R. I.....	2,079.10	50,463.92	26,159.19	78,702.21
Training station, Newport, R. I.....	2,251.00	8,300.02	60,170.15	70,721.17
War College, Newport, R. I.....	3,515.63	3,492.27	15,957.49	22,965.39
Naval station, New London, Conn.....	4,536.00	6,026.25	2,379.33	12,941.58
Naval station, Brooklyn, N. Y.....	24,412.85	780,684.97	304,130.97	1,109,228.79
Naval station, League Island, Pa.....	19,940.10	286,299.57	128,924.84	435,164.51
Naval Academy, Annapolis, Md.....	2,939.07	149,171.87	85,752.10	237,863.04
Naval station, Washington, D. C.....	22,976.56	323,350.90	117,260.94	463,588.40
Naval proving ground, Indian Head, Md.....	318.20	37,512.80	13,451.15	51,282.15
Naval station, Norfolk, Va.....	5,382.69	359,324.99	118,617.40	483,331.08
Naval station, Port Royal, S. C.....	12,049.03	47,521.03	37,956.00	97,526.06
Naval station, Key West, Fla.....	9,173.15	41,539.88	22,576.91	73,289.94
Naval station, Pensacola, Fla.....	703.84	67,384.29	18,578.06	86,666.19
Naval station, Mare Island, Cal.....	13,685.92	410,719.55	145,548.58	569,954.05
Naval station, Puget Sound, Wash.....	4,657.53	117,017.67	88,179.20	209,754.40
Havana.....	5,800.63	18,812.82	8,052.68	32,666.13
Hospital, Portsmouth, N. H.....	5,316.56	1,713.83		7,030.39
Hospital, Widows Island, Maine.....	182.34	720.00		902.34
Hospital, Chelsea, Mass.....	19,535.33	3,234.00		22,769.33
Hospital, Newport, R. I.....	15,891.02	2,410.83		18,301.85
Hospital, Brooklyn, N. Y.....	49,769.14	6,884.66		56,653.80
Laboratory, Brooklyn, N. Y.....	80,794.06	4,860.00		85,654.06
Hospital, Philadelphia, Pa.....	17,267.13	3,031.01		20,298.14
Hospital, Washington, D. C.....	6,278.18	1,832.26		8,110.44
Dispensary, Washington, D. C.....	2,341.97			2,341.97
Museum of Hygiene, Washington, D. C.....	2,611.99	2,820.00		5,431.99
Hospital, Norfolk, Va.....	30,227.62	3,486.72		33,714.34
Hospital, Port Royal, S. C.....	3,267.15	540.32		3,807.47
Hospital, Pensacola, Fla.....	3,328.94	509.88		3,838.82
Hospital, Mare Island, Cal.....	29,251.30	5,407.58		34,658.88
Naval Home, Philadelphia, Pa.....	44,106.89	21,215.29		65,322.18
Naval Observatory, Washington, D. C.....	10,137.52			10,137.52
Pay Office, Baltimore, Md.....	307.10			307.10
Yokohama, Japan.....	33,270.94			33,270.94
Sacketts Harbor, N. Y.....	365.00			365.00
Erie, Pa.....	375.00			375.00
Training station, San Francisco, Cal.....	3,346.90	14,885.74	22,977.29	41,209.93
Naval station, San Juan, P. R.....	7,425.28	17,535.33	16,643.54	41,604.15
Naval station, Cavite, P. I.....	56,764.76	306,629.65	155,981.01	519,375.42
Naval station, Hawaii.....	12,780.32	4,440.38	4,184.15	21,405.15
Piehlinique, Mexico.....	4,377.76		46.80	4,424.56
Naval station, Tutuila, Samoa.....	5,261.41	3,022.85	4,295.26	12,579.52
Hongkong, China.....	1,000.69			1,000.69
Naval station, Guam.....	18,937.50	17,039.30	12,745.58	48,722.38
Pollok, P. I.....	1,779.32			1,779.32
Naval station, New Orleans, La.....	608.15	4,001.15	11,919.37	16,528.67
Portsmouth Grove, Narragansett Bay.....	239.56			239.56
Port Isabela, P. I.....	22.07			22.07
Frenchmans Bay, Me.....	327.34	228.00		555.34
San Diego, Cal.....		232.96		232.96
Japonsaki Island, Sitka, Alaska.....			364.11	364.11
Total.....	618,716.78	3,664,853.38	1,614,858.59	5,898,428.75

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE P.—REPAIRS TO EQUIPAGE.

	Money vouchers.	Labor.	Material.	Total.
Arayat.....		\$20.20	\$15.19	\$35.39
Ajax.....		125.50	70.06	195.56
Alabama.....		568.13	351.99	920.12
Adams.....		108.48		108.48
Annapolis.....		289.90	288.91	576.81
Alert.....		78.34	79.55	157.89
Arethusa.....		2.48	2.92	5.40
Alliance.....		561.48	57.09	618.57
Alice.....		25.36	39.40	64.76
Amphitrite.....	\$349.83	17.87	9.59	377.29
Alexander.....		153.35	19.19	172.54
Barry.....			1.81	1.81
Brutus.....		34.88	.45	35.33
Buffalo.....	.85	472.47	109.62	582.94
Brooklyn.....		1,771.06	335.78	2,106.84
Callao.....		145.43	3.82	149.25
Concord.....		470.86	135.38	606.24
Constellation.....		57.84	15.71	73.55
Cushing.....		54.78	5.25	60.03
Cesar.....		111.73	18.33	130.06
Chesapeake.....	12.75	1,213.66	183.07	1,409.48
Culgon.....	150.40	8.84		159.24
Columbia.....	21.66	422.55	87.70	531.91
Cincinnati.....		6.72	.05	6.77
Celtic.....			2.22	2.22
Decatur.....			5.33	5.33
Dixie.....		102.80	36.93	139.73
Detroit.....	5.00			5.00
Dolphin.....		575.58	56.31	631.89
Don Juan de Austria.....		110.99	30.05	141.04
Davis.....		4.32		4.32
Du Pont.....		13.89		13.89
Essex.....		2,501.17	348.01	2,849.18
Eagle.....		468.63	130.11	598.74
Farragut.....		294.04	37.37	331.41
Frolic.....		30.72	15.03	45.75
Franklin.....		446.10	72.68	518.78
Foote.....		83.28	36.16	119.44
Fox.....		5.44		5.44
General Alava.....		137.21	9.85	147.06
Glacier.....		64.59	27.13	91.72
Hercules.....		22.48	1.04	23.52
Hartford.....		1,651.50	535.49	2,186.99
Hannibal.....		140.32	25.48	165.80
Indiana.....	32.00	2,383.75	1,281.42	3,697.17
Iris.....		16.17	1.38	17.55
Isla de Luzon.....		47.77		47.77
Isla de Cuba.....		16.75	1.53	18.28
Iowa.....	19.00	8.40	.48	27.88
Illinois.....		1,112.13	669.01	1,781.14
Independence.....		1,035.23	20.68	1,055.91
Justin.....		44.82		44.82
Kentucky.....	161.85	171.68	44.29	377.82
Kearsarge.....		1,335.19	748.53	2,083.72
Lebanon.....		19.96		19.96
Leicester.....		154.61	17.23	171.84
Leonidas.....		142.34	26.70	169.04
Leyden.....		86.52	13.51	100.03
Mayflower.....	15.50			15.50
Morris.....	5.00	15.56	.80	21.36
Mariveles.....		.92	7.71	8.63
Maebias.....	6.50	225.55	93.64	325.69
Michigan.....		30.48	1.31	31.79
Mohican.....		613.86	161.36	775.22
Monongahela.....		1,208.70	363.60	1,572.30
Manila.....		395.66	105.56	501.22
Minneapolis.....		6.08		6.08
Massachusetts.....	3.00	3,449.27	1,416.53	4,868.80
Marcellus.....		117.74	43.70	161.44
Marietta.....		2,926.36	855.65	3,782.01
Monterey.....		52.17	11.20	63.37
Nero.....		54.96		54.96
New York.....	642.42	8.95	35.56	686.93
Nipsic.....		113.97	73.83	187.80
Nausahan.....		309.65	58.07	367.72
New Orleans.....			12.14	12.14
Olympia.....		592.35	70.55	662.90
Oregon.....		8,080.49	4,970.89	13,051.38
Piscataqua.....		94.51	11.87	106.38
Peoria.....		10.80		10.80

BUREAU OF SUPPLIES AND ACCOUNTS.

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Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE P.—REPAIRS TO EQUIPAGE—Continued.

	Money vouchers.	Labor.	Material.	Total.
Panay.....		\$11.59		\$11.59
Prairie.....		8.75		8.75
Porter.....		220.20	\$30.06	250.26
Puritan.....		1,641.97	130.41	1,772.38
Pensacola.....	\$10.00	53.05		63.05
Philadelphia.....	35.00	590.42	149.58	775.00
Potomac.....		67.30		67.30
Panther.....	2.00			2.00
Princeton.....			12.47	12.47
Pompey.....		.92		.92
Quiros.....		290.60	151.27	441.87
Ranger.....	2.45	1,359.69	452.90	1,815.04
Richmond.....	20.00	69.14	2.02	91.16
Rodgers.....		26.92	6.74	33.66
Rainbow.....		308.74	41.00	349.74
Scorpion.....	62.40	188.31		250.71
Saturn.....		5.73	1.84	7.57
Solace.....		906.75	259.81	1,166.56
Sioux.....		6.08		6.08
Shubrick.....		30.87	6.20	37.07
Stockton.....		60.30	6.20	66.50
Sylph.....		33.24	3.59	36.83
Southery.....		117.84	44.89	162.73
San Francisco.....		94.03	39.17	133.20
Talbot.....	1.50			1.50
Topeka.....		17.81		17.81
Uncas.....			32.60	32.60
Urdaneta.....		10.04	5.60	15.64
Unadilla.....	3.00			3.00
Villalobos.....		28.59	33.63	62.22
Vigilant.....		4.40		4.40
Vicksburg.....		79.76	99.98	179.74
Vixen.....	63.00	1,426.68	763.07	2,252.75
Vermont.....		123.04	208.00	331.04
Winslow.....		1.76		1.76
Wisconsin.....		645.04	67.22	712.26
Wabash.....	19.00	27.87	94.35	141.22
Wilmington.....	490.11			490.11
Wheeling.....		24.40	9.26	33.66
Yorktown.....	362.05	348.72	146.44	857.21
Yankton.....	33.50	833.55	83.44	950.49
Zafiro.....		2.38	24.75	27.13
Wompatuck.....		65.53	241.88	307.41
Total.....	2,529.77	47,940.33	17,464.65	67,934.75

TITLE V.—MISCELLANEOUS.

Advertising.....	\$8,760.97			\$8,760.97
Freight.....	308,534.62			308,534.62
Transportation of enlisted men.....	161,494.63			161,494.63
Mileage of officers.....	299,753.28			299,753.28
Admiralty charts.....	7,556.70			7,556.70
Patent rights.....	20,000.00			20,000.00
Eclipse of the sun May 1, 1901.....	10,000.00			10,000.00
Expenses of recruiting parties.....	12,292.18			12,292.18
Printing, stationery, etc., for inspectors, medals, court-martial and investigation expenses; notaries' fees, cablegrams, custom-house charges, incidental expenses of bureaus, etc.....	192,034.23			192,034.23
Material furnished the Marine Corps, Grand Army of the Republic posts, etc.....	25,653.30		\$141,607.17	167,260.47
Miscellaneous labor at navy-yards, pay for holidays, leave, etc.....		\$951,314.42		951,314.42
Total.....	1,046,079.91	951,314.42	141,607.17	2,139,001.50

Statement of expenditures of money and material at shore stations and objects to which applied during the fiscal year ending June 30, 1902—Continued.

TITLE Z.—CONVERSION ACCOUNT.

	Money vouchers.	Labor.	Material.	Total.
Bureau of Equipment:				
Naval station, Portsmouth, N. H.		\$10,021.40	\$17,903.75	\$27,925.15
Naval station, Boston, Mass.		197,421.07	720,585.38	918,006.45
Naval station, Brooklyn, N. Y.		90,740.96	201,428.59	292,169.55
Naval station, League Island, Pa.		14,160.28	21,065.28	35,225.56
Naval station, Washington, D. C.		1,383.60	3,131.42	4,515.02
Naval proving ground, Indian Head, Md.		133.04		133.04
Naval station, Norfolk, Va.		26,987.26	38,296.88	65,284.14
Naval station, Port Royal, S. C.		68.72	20.21	88.93
Naval station, Key West, Fla.		2,419.99	1,142.56	3,562.55
Naval station, Mare Island, Cal.		46,766.85	58,066.39	104,833.24
Naval station, Puget Sound, Wash.		1,897.90	3,567.91	5,465.81
Naval station, Cavite, P. I.		13,345.03	23,784.54	37,129.57
Bureau of Navigation:				
Naval station, Norfolk, Va.		120.82		120.82
Bureau of Ordnance:				
Naval station, Portsmouth, N. H.		519.92	47,740.61	48,260.53
Naval station, Boston, Mass.		3,164.64	1,688.07	4,852.71
Torpedo station, Newport, R. I.		54,767.39	96,637.67	151,405.06
Naval station, Brooklyn, N. Y.		33,015.62	1,196,848.71	1,229,864.33
Naval station, League Island, Pa.		2,444.62	120,302.12	122,746.74
Naval station, Washington, D. C.		1,156,923.89	1,519,232.16	2,706,206.05
Naval proving ground, Indian Head, Md.		45,162.90	413,811.79	458,974.69
Naval station, Norfolk, Va.		11,328.06	256,160.20	267,488.26
Naval station, Port Royal, S. C.		37.18	10.64	47.82
Naval station, Pensacola, Fla.			82.24	82.24
Naval station, Mare Island, Cal.		12,256.66	514,345.07	526,601.73
Naval station, Cavite, P. I.		3,022.94	23,361.42	26,384.36
Bureau of Construction and Repair:				
Naval station, Portsmouth, N. H.		77,668.19	48,448.77	126,116.96
Naval station, Boston, Mass.		69,630.18	89,586.01	159,216.19
Naval station, Brooklyn, N. Y.		106,921.58	126,560.39	232,481.97
Naval station, League Island, Pa.		42,718.50	30,824.50	73,543.00
Naval station, Washington, D. C.		6,754.34	39.75	6,794.09
Naval station, Norfolk, Va.		111,405.87	87,490.45	198,896.32
Naval station, Port Royal, S. C.		8,287.30	4,181.86	12,469.16
Naval station, Pensacola, Fla.		3,539.44	5,595.20	9,134.64
Naval station, Mare Island, Cal.		95,992.57	94,969.93	190,962.50
Naval station, Puget Sound, Wash.		18,295.23	5,509.04	23,804.27
Naval station, Cavite, P. I.		43,980.50	28,872.45	72,852.95
Bureau of Steam Engineering:				
Naval station, Portsmouth, N. H.		44,882.45	30,283.82	75,166.27
Naval station, Boston, Mass.		9,770.24	23,975.15	33,745.39
Naval station, Brooklyn, N. Y.		28,276.71	54,179.31	82,456.02
Naval station, League Island, Pa.		2,392.31	3,375.00	5,767.31
Naval station, Norfolk, Va.		17,083.86	16,440.21	33,524.07
Naval station, Port Royal, S. C.		1,329.81	296.06	1,625.87
Naval station, Mare Island, Cal.		56,593.15	42,063.92	98,657.07
Naval station, Puget Sound, Wash.		1,987.76	455.49	2,443.25
Naval station, Cavite, P. I.		8,636.58	13,134.05	21,770.63
Bureau of Supplies and Accounts:				
Naval station, Brooklyn, N. Y.		178,084.33		178,084.33
Total		2,661,891.64	6,015,444.97	8,677,336.61

RECAPITULATION.

A.—Construction of ships	\$13,769,736.91	\$523,400.17	\$99,784.69	\$14,392,921.77
D.—Repairs to ships	328,802.12	3,679,746.63	1,725,618.16	5,734,166.91
E.—Real estate and chattels	4,591,724.97	1,052,661.29	1,086,431.43	6,730,817.69
F.—Machinery plant	151,668.49	344,380.59	994,225.28	1,490,274.36
G.—General maintenance	618,716.78	3,664,853.38	1,614,858.59	5,898,428.75
N.—Models and experiments	3,585.51	76,142.64	190,646.00	270,374.15
O.—Naval Militia	51,842.79		58,731.70	110,574.49
P.—Repairs to equipage	2,529.77	47,940.33	17,464.65	67,934.75
V.—Miscellaneous	1,046,079.91	951,314.42	141,607.17	2,139,001.50
W.—Repairs to supplies in store	10,040.63			10,040.63
Z.—Conversion account (for manufacture)		2,661,891.64	6,015,444.97	8,677,336.61
Expended for specific objects as above.	20,574,727.88	13,002,331.09	11,944,812.64	45,521,871.61
X.—Supplies purchased	14,028,439.66			14,028,439.66
Total	34,603,167.54	13,002,331.09	11,944,812.64	59,550,311.27

BUREAU OF SUPPLIES AND ACCOUNTS.

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STATEMENT C.

Statement of operations of naval-supply fund during fiscal year 1902.

Amount of fund	\$2,700,000.00
Value of stores received on account of purchases	1,931,918.51
Payments made on account of purchase	1,781,232.57
Value of stores issued for reimbursement	1,720,634.96
Value of stock on hand at navy-yards and in transit June 30, 1902.....	2,181,965.59
Cash available June 30, 1902:	
(a) Cash in Treasury	251,936.05
(b) Transfer statements awaiting adjustment.....	610,133.90
(c) Stores issued not reimbursed	28,994.81
Total.....	891,064.76
Outstanding liabilities June 30, 1902:	
(a) Stores received but not paid for.....	289,539.45
(b) Stores contracted for but not received	515,374.78
Total.....	804,914.23
Stores advertised, contracts not executed until after June 30, 1902	297,269.26

Comparative statement, fiscal years 1901 and 1902.

	1901.	1902.	Increase.	Decrease.
Amount of fund	\$2,500,000.00	\$2,700,000.00	\$200,000.00	.....
Stores received.....	1,814,420.64	1,931,918.51	117,497.87	.....
Payments made	1,840,658.96	1,781,232.57	.....	\$59,426.39
Stores issued	1,635,394.94	1,720,634.96	85,240.02	.....
Stock on hand June 30.....	1,946,871.87	2,181,965.59	235,093.72	.....
Outstanding liabilities June 30	433,176.18	804,914.23	371,738.05	.....

Balance sheet, June 30, 1902.

ASSETS.

Cash in Treasury.....	\$251,936.05
Transfer statements awaiting adjustment.....	610,133.90
Stores issued not reimbursed	28,994.81
Stock at navy-yards and in transit	2,181,965.59
Suspense (unsettled accounts, etc.).....	6,085.24
Total.....	3,079,115.59

LIABILITIES.

Capital.....	\$2,700,000.00
Reservations unpaid on stores received	19,586.57
Profit and loss	69,989.57
Stores received but not paid	289,539.45
Total.....	3,079,115.59

STATEMENT D.

Statement showing expenditures for maintenance and improvements at the several naval stations during the fiscal year ending June 30, 1902.

	Title G.—Maintenance.			Title E.— Real estate and chat- tels (im- prove- ments).	Title F.— Machinery plant (new machin- ery).	Total un- der Titles G, E, and F.
	Pay of offi- cers, etc.	Labor, ma- terial, etc., from state- ment B.	Total.			
Naval station, Portsmouth, N. H.	\$91,336.45	\$262,079.11	\$353,415.56	\$498,949.75	\$67,226.48	\$919,591.79
Naval station, Boston, Mass.	126,620.63	508,071.22	634,691.85	771,888.08	230,240.46	1,636,820.34
Naval station, Newport, R. I.	138,148.67	190,690.62	328,839.29	182,751.98	1,430.13	513,021.40
Naval station, New London, Conn.	4,050.55	12,941.58	16,992.13	10,851.85	.....	27,843.98
Naval station, Brooklyn, N. Y.	188,717.46	1,251,536.65	1,440,254.11	949,142.65	360,147.57	2,749,544.33
Naval station, League Island, Pa.	76,634.02	455,462.65	532,096.67	426,889.15	58,969.25	1,017,955.07
Naval Academy, Annapolis, Md.	290,084.43	237,863.04	527,947.47	654,833.24	8,457.77	1,191,238.48
Naval station, Washington, D. C.	149,155.23	479,472.80	628,628.03	474,415.65	210,195.41	1,313,239.09
Naval Observatory, Wash- ington, D. C.	22,680.50	10,137.52	32,818.02	127,684.24	.....	160,502.26
Naval proving ground, In- dian Head, Md.	10,693.69	51,282.15	61,975.84	15,877.91	10,579.96	88,433.71
Naval station, Norfolk, Va.	99,762.12	517,045.42	616,807.54	471,283.31	126,944.36	1,215,035.21
Naval station, Port Royal, S. C.	69,159.93	101,333.53	170,493.46	49,774.23	28.00	220,295.69
Naval station, Charleston, S. C. ....	.....	.....	.....	87,679.25	.....	87,679.25
Naval station, Key West, Fla.	37,686.10	73,289.94	110,976.04	241,173.58	.....	352,149.62
Naval station, Pensacola, Fla.	37,450.67	90,505.01	127,955.68	44,826.24	18,180.42	190,912.34
Naval station, Mare Island, Cal.	102,600.68	604,612.93	707,213.61	518,915.05	202,674.97	1,428,803.63
Training station, California ..	14,665.27	41,209.93	55,875.20	4,628.82	.....	60,504.02
Naval station, Puget Sound, Wash.	47,685.52	209,754.40	257,439.92	226,553.61	120,884.02	604,877.55
Havana, Cuba.	22,550.67	32,666.13	55,216.80	236,046.40	.....	291,263.20
Naval Home, Philadelphia ..	29,745.49	65,322.18	95,067.67	.....	.....	95,067.67
Yokohama, Japan.	28,735.61	33,270.94	57,006.55	16,217.36	.....	73,223.91
Sacketts Harbor, N. Y. ....	.....	365.00	365.00	.....	.....	365.00
Erie, Pa. ....	.....	375.00	375.00	.....	.....	375.00
Naval station, San Juan, P. R.	20,163.24	41,604.15	61,767.39	17,179.77	3,154.50	82,101.66
Naval station, Cavite, P. I.	110,642.23	519,375.42	630,017.65	55,443.53	71,135.68	756,596.86
Naval station, Hawaii.	21,607.27	21,405.15	43,012.42	26,120.16	.....	69,132.58
Pichilingue, Mexico. ....	.....	4,424.56	4,424.56	8,539.63	.....	12,964.19
Naval station, Tutuila, Samoa ..	.....	12,579.52	12,579.52	127,371.72	.....	139,951.24
Hongkong, China.	4,617.64	1,000.69	5,618.33	.....	.....	5,618.33
Naval station, Guam.	34,493.24	48,722.38	83,215.62	57.23	75.38	83,348.23
Pay office, Baltimore.	5,973.42	307.10	6,280.52	.....	.....	6,280.52
Pay office, Seattle, Wash.	4,070.91	.....	4,070.91	.....	.....	4,070.91
Naval station, New Orleans, La.	9,966.90	16,528.67	26,495.57	186,135.89	.....	212,631.46
Japonski Island, Alaska. ....	.....	364.11	364.11	19,046.73	.....	19,410.84
Frenchmans Bay, Me. ....	.....	555.34	555.34	191,659.14	.....	192,214.48
Portsmouth Grove, R. I. ....	.....	239.56	239.56	82,483.75	.....	82,723.31
Pollok, P. I. ....	.....	1,779.32	1,779.32	1,710.88	.....	3,490.20
Sangley Point, P. I. ....	.....	.....	.....	1,329.46	.....	1,329.46
Port Isabela, P. I. ....	.....	22.07	22.07	3,357.50	.....	3,379.57
San Diego, Cal. ....	.....	232.96	232.96	.....	.....	232.96
Total.	1,794,698.54	5,898,428.75	7,693,127.29	6,730,817.69	1,490,274.36	15,914,219.34

STATEMENT E.

Statement showing the value of real estate and chattels and machinery plants at the several naval stations, June 30, 1902.

	Real estate and chattels.	Machinery plants.
Naval station, Portsmouth, N. H.	\$3,545,689.29	\$532,748.17
Naval station, Boston, Mass.	13,482,394.43	1,067,366.31
Torpedo station, Newport, R. I.	296,004.88	61,176.96
Training station, Newport, R. I.	625,842.89	11,006.97
Naval War College, Newport, R. I.	101,681.01	
Naval station, New London, Conn.	289,844.23	795.00
Naval station, Brooklyn, N. Y.	22,255,153.02	1,844,479.36
Naval station, League Island, Pa.	3,989,464.46	384,771.93
Naval Academy, Annapolis, Md.	1,914,997.65	31,608.32
Naval Observatory, Washington, D. C.	997,975.37	
Naval station, Washington, D. C.	5,512,479.37	2,317,393.93
Marine headquarters, Washington, D. C.	221,639.83	
Naval proving ground, Indian Head, Md.	611,706.86	87,074.29
Naval station, Norfolk, Va.	6,784,038.24	990,108.93
Naval station, Charleston, S. C.	87,679.25	
Naval station, Port Royal, S. C.	1,129,545.60	70,426.56
Naval station, Key West, Fla.	1,092,243.11	48,005.81
Naval station, Pensacola, Fla.	1,819,317.88	152,711.36
Naval station, Mare Island, Cal.	5,905,516.89	862,821.46
Training station, San Francisco, Cal.	647,494.47	
Naval station, Puget Sound, Wash.	1,168,547.41	376,006.23
Sackett's Harbor, N. Y.	17,350.00	
Sangley Point, P. I.	1,329.46	
Naval station, San Juan, P. R.	219,235.45	10,762.92
Naval station, Guam.	50,569.62	75.38
Naval station, Havana.	236,046.40	
Naval station, Cavite, P. I.	1,700,653.33	199,767.81
Naval station, New Orleans, La.	849,069.35	
Naval station, Tutuila, Samoa.	239,473.27	
Japonski Island, Sitka, Alaska.	23,424.73	
Frenchmans Bay, Me.	301,421.61	
Naval station, Hawaii.	818,412.28	
Pichilique, Mexico.	37,031.42	
Portsmouth Grove, Narragansett Bay, R. I.	118,192.75	
Yokohama, Japan.	52,760.07	
Pollok, P. I.	1,710.88	
Port Isabel, P. I.	3,357.50	
Naval Home, Philadelphia.	901,944.45	
Total	78,051,418.71	9,049,107.70

STATEMENT F.

Statement of payments through the Paymaster-General's Office on contract, open-contract, and open-purchase vouchers during the fiscal year ending June 30, 1902.

Bureau.	Contract.	Open contract.	Open purchase.	Total.
Yards and Docks.	\$3,205,978.23	\$125,371.80	\$501,089.96	\$3,832,439.99
Equipment	1,037,968.52	761,540.03	1,293,009.38	3,092,517.93
Navigation	638,246.73	173,057.63	147,893.44	959,197.80
Ordnance	3,863,614.94	188,500.00	4,012,656.28	8,064,771.22
Construction and Repair	885,813.36	138,323.22	919,549.07	1,943,685.65
Steam Engineering	388,277.91	11,685.10	604,616.21	1,004,579.22
Supplies and Accounts	2,368,082.56	48,881.45	691,709.56	3,108,673.57
Medicine and Surgery	150,795.33	68,204.57	110,190.19	329,190.09
Secretary's Office	10,467,735.06	72,253.02	7,822.88	10,547,810.96
Total	23,006,512.64	1,587,816.82	8,288,536.97	32,882,866.43

STATEMENT G.

Statement showing the value of supplies (excepting provisions, clothing, and small stores and contingent, Bureau of Supplies and Accounts, stores) on hand July 1, 1901, the receipts from purchase and other sources, the expenditures during the year, and the balance on hand June 30, 1902.

	On hand July 1, 1901, with receipts and expenditures during fiscal year 1902.	Balances on hand June 30, 1902.
Balances on hand:		
Navy-yard, Portsmouth, N. H.	\$1,517,518.97	\$1,580,482.02
Navy-yard, Boston, Mass.	3,268,495.64	3,117,179.35
Torpedo station, Newport, R. I.	1,180,223.49	866,072.39
Training station, Newport, R. I.	14,113.14	4,334.45
Naval station, New London, Conn.	20,258.75	8,057.69
Navy-yard, New York.	8,409,864.44	8,192,974.27
Navy-yard, League Island.	3,037,418.78	3,497,999.30
Naval Academy, Annapolis.	26,460.58	23,412.72
Navy-yard, Washington.	4,147,114.24	4,295,709.57
Naval Observatory, Washington.	64,453.56	57,746.96
Naval proving ground, Indian Head.	600,476.27	751,963.77
Navy-yard, Norfolk.	6,414,598.95	5,488,177.78
Naval station, Port Royal, S. C.	96,236.01	128,881.44
Naval station, Key West, Fla.	111,593.88	60,106.34
Navy-yard, Pensacola.	71,290.78	62,363.13
Navy-yard, Mare Island, Cal.	3,914,579.07	4,848,370.99
Navy-yard, Puget Sound, Wash.	148,862.82	307,034.56
Training station, San Francisco, Cal.	937.78	2,974.54
Naval station, Hawaii.	57,618.93	120,943.73
Naval station, San Juan, P. R.	15,305.80	30,714.18
Naval station, Cavite, Philippine Islands.	1,660,438.11	2,051,179.14
Coaling station, Pichilique, Mexico.	7,809.77	18,801.51
Coaling station, Tutuila, Samoan Islands.	14,200.18	57,573.89
Island of Guam.	37,584.11	31,082.27
Japonski Island, Sitka, Alaska.		22,966.20
Cargo ship Nanshan.	11,883.01	23,988.97
Cargo ship Zafiro.	462.86	
Cargo ship Iris.		4,956.98
Shipments between navy-yards, in transit.	189,026.40	471,476.85
Total on hand July 1, 1901.	35,038,826.32	
Received during the fiscal year 1902:		
Under Title X—		
From open purchase.	\$7,843,129.49	
From contracts.	4,473,079.77	
From manufacture, Title Z.	6,962,486.54	
From gain by inventory.	466,546.68	
From transfers from ships, Titles B and Y.	2,519,744.83	
	22,264,987.31	
	57,303,813.63	
Expended during the fiscal year 1902:		
To Title A, for use.	\$99,784.69	
To Title D, for use.	1,725,618.16	
To Title E, for use.	1,086,431.43	
To Title F, for use.	994,225.28	
To Title G, for use.	1,614,858.59	
To Title N, for use.	190,646.00	
To Title O, for use.	58,731.70	
To Title P, for use.	17,464.65	
To Title V, for use.	141,607.17	
To Title Z, for use.	6,015,444.97	
	11,944,812.64	
To Title V, sold to other departments.	65,265.82	
To Title W, condemned.	748,306.34	
To Title W, revalued.	798,694.13	
To Titles B and Y, transferred to ships.	7,619,205.71	
	21,176,284.64	
Total.	36,127,528.99	36,127,528.99

STATEMENT H.

Statement of the value of supplies received and expended on board ships in commission, excepting medical and pay officers' stores, for the fiscal year ending June 30, 1902.

RECEIPTS.

Bureau.	Balance on hand July 1, 1901.	Receipts.	Total on hand and received.
Equipment	\$3,049,612.37	\$2,873,995.19	\$5,923,607.56
Ordnance	11,926,681.40	5,135,348.53	17,062,029.93
Construction and Repair	1,888,212.18	881,346.38	2,769,558.56
Steam Engineering	845,283.38	2,144,900.41	2,990,183.79
Total	17,709,789.33	11,035,590.51	28,745,379.84

EXPENDITURES.

Bureau.	Expended for use and condemned.	Expended, transferred.	Material transferred to Title A, to inventory, and sold.	Total expendi- tures.	Balance on hand June 30, 1902.
Equipment	\$488,081.45	\$2,009,852.07	\$28,574.29	\$2,526,507.81	\$3,397,099.75
Ordnance	1,079,919.63	1,730,090.56	.....	2,810,010.19	14,252,019.74
Construction and Repair	264,156.64	284,266.40	.....	548,423.04	2,221,135.52
Steam Engineering	1,924,773.93	124,566.08	2,058.17	2,051,398.18	938,785.61
Total	3,756,931.65	4,148,775.11	30,632.46	7,936,339.22	20,809,040.62

SUMMARY.

Balance on hand July 1, 1901	\$17,709,789.33	
Received during the fiscal year 1902	11,035,590.51	
		\$28,745,379.84
Expended, cost of commission (use and condemned)	3,756,931.65	
Expended, transferred	4,148,775.11	
Material transferred to Title A, to inventory, and sold	30,632.46	
		7,936,339.22
Balance on hand June 30, 1902		20,809,040.62
Value of stores in transit from yards and stations to ships		685,174.71
Total value of stores on board ships and in transit		21,494,215.33

STATEMENT I.

Statement showing cost of maintaining ships in commission during fiscal year ending June 30, 1902, excepting medical stores and repairs.

Vessels.	Accrued pay of officers, crew, and marines.	Commuted rations.	Incidental expenses (pilots, postage, canal dues, etc.).	Value of stores expended.				Total expenditures under Title C, cost of commission.	Months in commission.
				Equipment.	Ordnance.	Construction and Repair.	Steam Engineering.	Supplies and Accounts.	
Abarenda.....	\$62,230.60	\$16,023.60	\$594.31	\$1,997.19	\$488.20	\$1,851.64	\$11,783.40	\$158.14	12
Alex.....			62,772.56	7.22	822.51	5,129.63	8,365.99		12
Alabama.....	238,528.30	21,765.30	2,340.46	5,275.22	78,272.64	7,811.97	37,967.32	26,218.60	12
Albatross.....	147,367.54	12,975.60	5,105.72	6,769.50	8,275.71	5,072.65	46,498.09	19,609.34	12
Albatross.....	6,701.36	1,575.90	4.33		299.12	143.36	944.90		7
Albatross.....	78,693.68	8,241.30	891.33	2,634.87	6,271.63	1,816.74	12,039.22	11,083.23	12
Alexander.....			50,029.84	295.77		367.03	8,805.67		12
Albatross.....	103,620.93	10,742.70	1,479.01	3,671.98	3,876.21	1,612.80	3,308.07	16,059.75	12
Amphitrite.....	39,278.73	3,690.00	251.35	771.13	15,862.46	1,900.25	3,921.42	2,010.17	5
Annapolis.....	67,465.94	5,351.40	215.22	1,956.19	8,786.26	1,600.83	8,711.79	5,744.74	12
Arcturion.....	11,701.33	3,321.30	83.98	17.70	1,949.48	372.92	2,822.11		12
Arcturion.....			29,001.75			1,021.74	12,471.73		12
Atlanta.....	97,396.67	8,594.70	2,583.25	2,789.22	11,628.65	6,670.82	49,006.73	11,427.74	12
Bacon.....	5,333.33	1,579.20	4.75		102.24	75.73	557.38		12
Birmingham.....	15,578.85	1,026.90	315.22	826.92	670.90	644.64	9,667.54	1,015.21	2
Brooklyn.....	255,035.62	23,629.80	13,449.01	20,049.12	27,969.23	12,080.83	124,557.25	21,965.41	12
Brutus.....	6,432.73	1,081.50	20,401.87	204.88	2,154.96	1,299.10	8,412.25	15.57	12
Buffalo.....	221,646.55	24,136.80	4,136.70	5,764.13	7,281.81	4,882.39	39,196.97	32,932.38	12
Cesar.....			52,281.41		7.61	254.39	2,634.75		12
Columbianes.....	4,147.86	1,275.60	7.68	16.81	2,488.59	300.84	1,085.70		12
Castine.....	16,303.95	1,392.00	1,017.52	1,958.78	754.37	1,399.25	13,157.94	1,303.30	3
Celtic.....	59,984.21	4,789.20	5,218.89	4,275.63	37.19	2,728.33	27,009.91	4,962.36	12
Chesapeake.....	30,863.55	4,634.70	72.41	2,211.56	1,188.04	1,370.86	368.53	994.68	5
Chicago.....	201,377.07	17,122.60	2,489.93	5,088.85	17,098.09	5,890.87	65,428.80	24,727.11	12
Cincinnati.....	79,466.20	6,166.50	987.00	1,146.76	3,814.22	1,073.67	9,932.60	8,229.85	6
Coal Barge No. 1.....	3,877.06	768.30					985.95		12
Columbia and Vermont.....	158,243.05	31,569.30	414.82	11,662.95	870.98	3,855.57	8,711.11		12
Concord.....	65,263.14	4,428.60	348.00	3,535.21	5,364.08	2,427.47	28,569.74	5,714.69	8
Constellation and Newport.....	149,655.61	30,299.10	654.95	13,052.24	13,501.26	2,094.70	901.25		12
Congress.....	39,690.28	8,481.90	5,257.12	898.99		1,145.48	20,791.76		3
Dixie.....	200,606.57	20,054.70	1,739.07	3,156.57	3,968.39	2,933.84	36,367.04	26,830.35	12
Dolphin.....	60,037.78	9,307.20	450.50	4,295.15	2,425.95	1,818.39	9,859.52	2,584.19	12
Don Juan de Austria.....	45,094.46	3,872.10	341.29	2,181.81	12,696.37	1,697.01	18,828.81	3,811.83	12
Eagle.....	25,503.76	5,825.40	41.49	1,291.84	426.84	435.64	2,949.20	53.48	12
Essex.....	76,678.22	8,453.10	842.30	2,196.91	3,232.44	895.18	6,128.47	11,295.78	12
Franklin.....	144,323.14	30,324.00	216.14	7,744.75	1,979.41	2,986.24	260.03	90.30	12
Frolic.....	39,247.81	3,489.90	396.43	1,540.59	1,833.01	1,245.41	7,858.44	2,916.93	12

General Alava	37,780.17	9,410.70	921.08	964.70	1,354.60	10,426.46	60,948.61	12
Glacier	60,433.12	5,239.80	3,819.01	130.54	2,350.15	35,757.90	116,520.99	12
Gardoqui	3,372.42		2.59		36.56	236.23	4,575.46	12
Hannibal			a 23,454.00		333.13	6,411.60	30,311.08	12
Hartford	146,400.24	14,728.20	1,972.56	8,879.05	1,992.52	12,195.37	212,346.17	12
Helena	88,914.93	8,113.50	5,637.65	6,598.41	6,737.74	25,736.96	156,151.83	12
Illinois	202,846.96	17,920.30	2,018.19	28,878.92	4,771.07	33,370.90	318,632.54	10
Independence	72,197.72	13,461.00	215.09	1,790.03	1,136.64	694.31	98,274.81	12
Indiana	189,503.24	17,900.10	1,784.47	37,432.04	5,028.42	43,641.02	323,085.56	12
Iowa	222,800.47	19,493.10	4,562.90	40,779.85	10,762.97	101,290.83	437,725.83	12
Iris	11,192.63	1,428.30	a 20,653.87	3.80	817.52	13,947.93	48,104.53	12
Iroquois	18,111.29	4,033.20	1,559.38				23,763.87	12
Isla de Cuba	40,603.36	3,804.00	457.39	5,386.74	1,607.20	13,964.67	68,942.16	12
Isla de Luzon	63,137.92	5,615.70	691.35	5,273.12	2,389.07	16,289.20	102,877.93	12
Justin			a 32,427.25				39,007.87	12
Keatsarge	261,633.57	23,293.20	3,978.98	77,971.30	8,736.59	41,235.70	458,289.51	12
Kentucky	239,294.46	23,983.50	6,141.69	31,013.63	10,617.67	85,943.68	450,490.66	12
Lancaster	135,961.27	15,401.40	2,098.29	1,748.08	2,989.66	7,948.17	210,766.68	12
Lebanon			a 13,210.12				17,657.86	9
Leonidas			a 30,003.96				35,786.76	12
Leyte	5,576.21	1,744.80	287.99	256.77	39.73	1,042.14	9,262.77	12
Machias	62,707.54	5,623.50	501.55	3,691.26	879.50	10,000.52	91,988.33	12
Manila	116,317.65	14,359.50	246.19	1,675.72	2,056.14	9,658.78	156,677.48	12
Marietta	64,771.31	5,246.70	1,604.23	2,309.89	1,787.61	18,321.49	102,840.42	12
Mariveles	9,787.18	2,543.70	135.53	158.05	294.89	2,067.26	15,049.85	12
Massachusetts	191,219.29	17,983.70	1,075.71	70,360.14	6,712.85	33,330.60	349,070.68	12
Mayflower	8,006.90	813.00	144.14	137.42	413.96	3,042.74	15,105.00	2
Michigan	48,206.75	11,142.60	784.67	4,840.87	1,451.86	4,082.95	72,094.63	12
Mindora	2,623.24	652.20	169.81	3.38	129.10		4,092.39	12
Minneapolis	18,648.59	3,510.60	13.50	67.88	198.85	421.60	23,058.64	12
Mobean	106,390.24	10,210.20	910.34	3,305.96	2,444.78	13,949.69	154,677.37	12
Monadnock	107,937.76	9,322.30	2,458.80	14,780.96	2,422.74	34,069.09	185,112.12	12
Monrocy	62,858.57	5,866.80	3,588.84	1,131.75	972.98	4,133.25	84,728.33	12
Monongahela	102,543.22	11,060.80	826.98	2,636.72	1,488.15	109.37	145,176.70	12
Monterey	101,073.92	8,658.90	3,904.78	9,258.57	8,730.73	24,021.03	163,388.41	12
Nanshan	2,757.24	118.80	22,649.48	112.30	265.07	7,797.30	33,784.92	12
Nashville	81,692.51	6,980.40	2,198.24	3,200.08	3,447.20	33,006.00	142,641.74	12
Naval Academy vessels	121,041.44	23,142.80	484.93	4,843.51	8,511.84	11,354.56	168,171.89	12
Nero			a 26,753.03				28,820.64	12
Newark	11,416.45	613.50	38.06	222.54	1,522.61	11,412.44	27,425.48	1
New Orleans	144,412.32	13,071.60	2,770.66	61,334.07	5,612.84	57,741.89	306,334.68	12
New York	245,800.72	21,800.40	15,627.00	51,392.61	9,037.90	84,316.55	459,572.00	12
Nipsic	7,304.30	1,773.00	1,773.00	2,608.25	2,608.25	37.29	10,946.87	12
Olympia	80,847.13	6,389.70	1,257.79	2,686.19	1,835.14	12,535.19	115,352.98	5
Oregon	67,138.08	6,340.50	135.46	1,931.54	1,797.11	17,162.70	102,749.32	12
Pampana	12,430.56	3,198.00	37.90	447.43	209.76	1,880.46	18,297.28	12
Panay	9,809.01	2,718.60	441.95	201.99	350.88	1,388.89	14,996.91	12
Paragua	12,237.01	3,257.40	97.50	300.82	202.95	869.21	16,972.94	12
Pensacola	112,056.80	23,918.70	815.07	483.77	1,069.10	7,846.23	150,224.15	12
Petrel	10,813.06	759.30	99.01	57.67	260.47	4,921.62	18,516.89	2
Philadelphia	148,854.05	12,744.30	1,240.94	28,893.04	4,863.08	60,078.63	277,315.87	12

a Includes pay of merchant crews.

Statement showing cost of maintaining ships in commission during fiscal year ending June 30, 1902, excepting medical stores and repairs—Continued.

Vessels.	Accrued pay of officers, crew, and marines.	Committed rations.	Incidental expenses (pilottage, postage, canal dues, etc.).	Value of stores expended.					Supplies and Accounts.	Total expenditures under Title C, cost of commission.	Months in commission.
				Equipment.	Ordnance.	Construction and Repair.	Steam Engineering.				
Piscataqua.....	\$23,312.21	\$4,761.30	\$161.92	\$2.00	\$1,725.69	\$636.50	\$3,625.87	.....	.....	\$34,225.49	12
Pompey.....			a 29,574.02	21.28	.....	311.45	5,836.38	.....	.....	35,743.13	12
Potomac.....	12,922.45	3,060.90	631.17	21.95	34.80	134.57	3,861.96	.....	.....	20,667.80	12
Prairie.....	122,983.33	12,980.00	1,184.73	3,329.50	6,483.06	2,974.21	24,082.99	\$19,471.89	.....	193,481.71	8
Princeton.....	64,928.85	5,468.10	637.23	3,121.76	4,515.47	1,498.56	13,681.30	5,948.77	.....	99,800.04	12
Puritan.....	60,040.83	5,689.20	121.15	2,400.79	2,147.51	1,302.28	6,356.43	3,621.63	.....	81,679.82	12
Quiros.....	18,405.29	5,157.90	138.91	.....	228.33	285.33	2,615.72	.....	.....	26,831.48	12
Rainbow.....	65,506.52	6,763.50	7,196.06	4,767.52	1,308.12	2,490.80	18,371.19	5,195.81	.....	108,599.52	7
Ranger.....	67,739.92	6,083.30	355.38	3,657.50	859.59	2,290.28	16,572.88	7,275.30	.....	104,814.15	12
Richmond.....	61,523.52	10,834.10	45.60	2,714.29	381.51	432.51	1,562.26	85.31	.....	77,529.10	12
Samat.....	4,262.77	1,007.10	21.74	42.30	3,522.73	369.85	394.84	.....	.....	9,621.33	12
San Francisco.....	72,281.98	6,019.80	498.64	2,539.22	7,551.04	1,527.38	17,227.78	7,082.46	.....	114,728.30	6
Saturn.....		302.10	a 29,482.64	43.18	7.52	283.40	9,146.19	.....	.....	38,962.93	12
Scorpion.....	3,379.39		2.00	1,680.49	44.74	2,308.53	999.43	225.38	.....	8,942.06	1
Solace.....	123,840.03	12,501.90	2,601.70	4,922.83	104.07	3,032.03	76,567.97	10,528.95	.....	234,099.48	12
Sterling.....			a 15,843.17	248.36	464.81	1,032.94	4,321.87	.....	.....	21,911.15	9
Sylph.....	12,015.22	2,637.90	43.69	9.56	.....	76.40	912.92	.....	.....	15,685.69	12
Topeka.....	91,129.10	9,166.30	877.73	4,372.53	3,628.06	2,608.84	16,517.17	13,470.92	.....	141,770.65	12
Union.....	16,727.06	3,913.20	205.59	.....	.....	.....	.....	54.36	.....	20,900.21	12
Urdaneta.....	5,685.73	1,784.10	11.00	.....	447.72	122.38	413.06	.....	.....	8,463.99	12
Vicksburg.....	64,942.97	5,362.80	3,342.19	3,501.79	4,493.98	1,547.49	12,124.15	5,727.17	.....	101,042.54	12
Villalobos.....	19,291.70	4,603.50	349.27	46.04	2,558.40	565.41	3,324.42	.....	.....	30,738.74	12
Vixen.....	39,243.55	7,612.80	139.86	3,017.15	484.94	846.08	7,323.56	21.37	.....	58,689.31	12
Wabash.....	86,601.46	27,159.50	62.78	4,712.60	.....	1,035.61	2,530.17	.....	.....	122,102.12	12
Wheeling.....	24,567.16	2,449.50	127.95	1,169.69	655.38	826.23	6,321.73	2,020.92	.....	38,138.56	4
Wilmington.....	94,897.73	9,083.90	3,035.14	5,416.47	5,447.16	4,541.81	31,584.45	6,807.99	.....	160,764.65	12
Wisconsin.....	228,357.16	20,484.00	1,339.32	12,611.02	68,332.16	9,669.54	88,350.34	23,133.40	.....	452,276.94	12
Wompatuck.....	15,002.38	3,166.50	97.30	.....	55.97	397.03	5,613.33	.....	.....	24,832.51	12
Yankton.....	41,410.19	8,643.90	254.35	1,167.09	85.48	708.56	5,264.52	19.82	.....	57,553.91	12
Yorktown.....	83,958.25	7,237.80	1,002.80	4,611.24	6,599.17	2,743.96	39,215.11	8,071.49	.....	153,439.82	12
Zafiro.....	2,559.84	171.90	a 24,974.69	.....	.....	669.44	10,028.66	31.55	.....	38,436.08	12
Torpedo boats.....	62,365.80	14,053.90	1,377.67	486.28	192,609.75	4,975.08	53,843.15	.....	.....	329,211.63	.....
Total cost of commission (Title C).....	8,242,432.29	964,524.40	639,134.31	334,668.12	1,078,246.31	263,969.06	2,075,536.02	738,168.27	.....	14,381,678.78	.....
Fish Commission vessels (Title M).....	59,121.61	11,676.00	82.41	.....	.....	.....	.....	98.99	.....	70,924.01	.....
Total.....	8,301,553.90	976,200.40	639,166.72	334,668.12	1,078,246.31	263,969.06	2,075,536.02	738,262.26	.....	14,402,602.79	.....

a Includes pay of merchant crews.

STATEMENT K.

Statement of public sales of Government property during the fiscal year 1902.

Date of sale.	Place of sale.	By whom deposited.	Gross receipts.	Expenses of sales.	Net receipts.
Aug. 24, 1901	Portsmouth, N. H.	James E. Cann.....	\$91.00		\$91.00
Sept. 28, 1901	do	do	505.00	\$6.00	499.00
Oct. 31, 1901	do	do	4,232.42	207.91	4,024.51
Nov. 15, 1901	do	do	101.50		101.50
Jan. 15, 1902	do	do	11.00		11.00
July 27, 1901	Boston, Mass.	W. W. Barry	4,576.12	14.90	4,561.22
Sept. 3, 1901	do	Geo. E. Hendee.....	129.30		129.30
Mar. 24, 1902	do	do	30.00		30.00
May 28, 1902	do	W. W. Barry	7,281.65	71.67	7,209.98
Dec. 10, 1901	Newport, R. I.	W. B. Wilcox	4,836.35	52.21	4,784.14
Sept. 28, 1901	New York, N. Y.	Lawrence G. Boggs	5,703.97	433.01	5,270.96
Mar. 26, 1902	do	do	6,874.51	53.83	6,820.68
July 11, 1901	League Island, Pa.	Reah Frazer.....	4,752.50	242.67	4,509.83
Feb. 11, 1902	Washington, D. C.	S. L. Heap	69,716.82	248.21	69,468.61
Aug. 29, 1901	Indian Head, Md.	L. Hunt.....	34.50		34.50
Sept. 4, 1901	do	S. L. Heap	4,809.37	239.64	4,569.73
Sept. 5, 1901	do	L. Hunt.....	524.40	28.50	495.90
June 30, 1902	do	S. L. Heap	1,310.00		1,310.00
Sept. 12, 1901	Norfolk, Va.	W. W. Galt.....	17,568.93	350.34	17,218.59
Oct. 28, 1901	do	do	177.00		177.00
Feb. 14, 1902	do	James S. Phillips	101.00		101.00
Mar. 15, 1902	Pensacola, Fla.	H. H. Balthis	1,732.53	102.86	1,629.67
Apr. 30, 1902	do	do	21.60		21.60
Aug. 26, 1901	Mare Island, Cal.	Jonathan Brooks	314.44	7.61	306.83
Nov. 11, 1901	do	do	109.75	5.00	104.75
June 3, 1902	Havana, Cuba.....	H. T. Skelding	125.00	9.76	115.24
Nov. 29, 1901	Cavite, P. I.	Dexter Tiffany	333.00	16.65	316.35
Feb. 28, 1902	do	John Ross Martin	1,382.25	69.12	1,313.13
Mar. 13, 1902	Erie, Pa. (U. S. S. Michigan).	C. W. Penrose.....	142.00	4.00	138.00
Mar. 21, 1902	U. S. S. Glacier (Sidney, New South Wales).	T. S. Jewett.....	382.02		382.02
Aug. 12, 1901	Homing pigeons.....	See "List of purchasers"	182.22	79.61	102.61
Dec. 4, 1901	Boston, Mass. (U. S. S. Minnesota).	Secretary of the Navy..	25,738.38	94.87	25,643.51
Mar. 5, 1902	League Island, Pa. (U. S. monitor Catskill).	do	11,788.00	106.13	11,681.87
Do	League Island, Pa. (U. S. monitor Manhattan).	do	15,218.00	129.27	30,306.73
Apr. 15, 1902	League Island, Pa. (U. S. monitor Mahopac).	do	15,218.00		
Apr. 15, 1902	New York, N. Y. (U. S. S. Vermont).	do	15,658.00	91.13	15,566.87
	Total		221,712.53	2,664.90	219,047.63

Date of sale.	Place of sale.	By whom deposited.	Credited to miscellaneous receipts.	Credited to appropriations—	
				Clothing and small stores.	Ordnance material, proceeds of sales.
Aug. 24, 1901	Portsmouth, N. H.	James E. Cann.....	\$91.00		
Sept. 28, 1901	do	do	499.00		
Oct. 31, 1901	do	do	4,024.51		
Nov. 15, 1901	do	do	101.50		
Jan. 15, 1902	do	do	11.00		
July 27, 1901	Boston, Mass.	W. W. Barry	4,561.22		
Sept. 3, 1901	do	Geo. E. Hendee.....	129.30		
Mar. 24, 1902	do	do	30.00		
May 28, 1902	do	W. W. Barry	2,582.97	\$2,713.81	\$1,913.20
Dec. 10, 1901	Newport, R. I.	W. B. Wilcox	218.34		4,565.80
Sept. 28, 1901	New York, N. Y.	Lawrence G. Boggs	3,360.00	357.76	1,553.11
Mar. 26, 1902	do	do	4,814.69	1,722.90	283.09
July 11, 1901	League Island, Pa.	Reah Frazer.....	4,483.28	24.18	2.37
Feb. 11, 1902	Washington, D. C.	S. L. Heap	1,291.90		68,176.71
Aug. 29, 1901	Indian Head, Md.	L. Hunt.....	34.50		
Sept. 4, 1901	do	S. L. Heap			4,569.73
Sept. 5, 1901	do	L. Hunt.....			495.90
June 30, 1902	do	S. L. Heap			1,310.00
Sept. 12, 1901	Norfolk, Va.	W. W. Galt.....	12,120.14	913.49	4,184.56
Oct. 28, 1901	do	do	177.00		
Feb. 14, 1902	do	James S. Phillips	101.00		
Mar. 15, 1902	Pensacola, Fla.	H. H. Balthis	1,624.67	8.00	2.00

Statement of public sales of Government property during the fiscal year 1902—Continued.

Date of sale.	Place of sale.	By whom deposited.	Credited to miscellaneous receipts.	Credited to appropriations—	
				Clothing and small stores.	Ordnance material, proceeds of sales.
Apr. 30, 1902	Pensacola, Fla.	H. H. Balthis	\$21.60		
Aug. 26, 1901	Mare Island, Cal.	Jonathan Brooks	306.83		
Nov. 11, 1901	do	do	104.75		
June 3, 1902	Havana, Cuba	H. T. Skelding	115.24		
Nov. 29, 1901	Cavite, P. I.	Dexter Tiffany	316.35		
Feb. 28, 1902	do	John Ross Martin	1,260.23	\$52.90	
Mar. 13, 1902	Erie, Pa. (U. S. S. Michigan).	C. W. Penrose	138.00		
Mar. 21, 1902	U. S. S. Glacier (Sidney, New South Wales).	T. S. Jewett	382.02		
	Homing pigeons	See "List of purchasers"	102.61		
Aug. 12, 1901	Boston, Mass. (U. S. S. Minnesota).	Secretary of the Navy	25,643.51		
Dec. 4, 1901	League Island, Pa. (U. S. monitor Catskill).	do	11,681.87		
Mar. 5, 1902	League Island, Pa. (U. S. monitor Manhattan).	do	30,306.73		
Do	League Island, Pa. (U. S. monitor Mahopac).	do			
Apr. 15, 1902	New York, N. Y. (U. S. S. Vermont).	do	15,566.87		
	Total		126,202.72	5,788.04	\$87,056.87

RECAPITULATION.

Portsmouth, N. H.	\$4,940.92
Boston, Mass.	12,017.07
Newport, R. I.	4,836.35
New York, N. Y.	12,578.48
League Island, Pa.	4,752.50
Washington, D. C.	69,716.82
Indian Head, Md.	6,678.27
Norfolk, Va.	17,846.93
Pensacola, Fla.	1,754.13
Mare Island, Cal.	424.19
Havana, Cuba	125.00
Cavite, P. I.	1,715.25
Erie, Pa. (U. S. S. Michigan)	142.00
U. S. S. Glacier (Sidney, New South Wales)	382.02
Homing pigeons (see "List of purchasers")	182.22
Condemned vessels	83,620.38
Gross proceeds	221,712.53
Expenses of sales	2,664.90
Net proceeds	219,047.63
Deposited to credit:	
Miscellaneous receipts	126,202.72
Clothing and small stores fund	5,788.04
Ordnance material, proceeds of sales	87,056.87
Total	219,047.63

List of purchasers, with amount received from each.

Navy-yard, Portsmouth, N. H., August 24, 1901:		Navy-yard, Portsmouth, N. H., January 15, 1902:	
Thomas W. Rand	\$91.00	Portsmouth Veteran Fireman's Association	\$11.00
Navy-yard, Portsmouth, N. H., September 28, 1901:		Navy-yard, Boston, Mass., July 27, 1901:	
Marshall & Varney	505.00	L. E. Lunt	635.39
Navy-yard, Portsmouth, N. H., October 31, 1901:		Nolan Brothers	168.80
L. E. Lunt	648.90	M. Norton & Co.	677.41
Gutterson & Gould	53.50	L. P. Buckley	2,584.67
Nolan Brothers	244.86	F. L. Young & Kimball	509.85
Miller Brothers	1,646.53	Total	4,576.12
Samuel Butler & Co	1,625.00	Navy-yard, Boston, Mass., September 3, 1901:	
George A. Athorne	13.63	M. Norton & Co.	129.30
Total	4,232.42	Navy-yard, Boston, Mass., March 24, 1902:	
Navy-yard, Portsmouth, N. H., November 15, 1901:		John W. Weeks	30.00
George D. Shannon	101.50		

BUREAU OF SUPPLIES AND ACCOUNTS.

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List of purchases, with amount received from each—Continued.

Navy-yard, Boston, Mass., May 28, 1902:

C. Seligman	\$497.93
M. Dunne & Co.	251.65
S. S. Vinal & Co.	93.28
J. Packard Dredging Co.	.51
B. B. Abrahams	433.10
C. S. Hanks	5.00
Miller Brothers	1,018.78
F. Bannerman	602.56
J. Robertson	62.50
L. E. Lunt	1,346.33
H. Sherman	26.30
T. Burke	331.49
A. B. Cassidy	23.50
C. J. Godfrey	833.25
J. P. O'Riorden	43.00
C. P. Rolfe	25.26
Wm. Read & Sons	168.00
L. B. Friswold	38.05
M. Wold	2.15
Dreifus & Co.	323.60
W. S. Kirk	136.00
L. P. Nolan	57.13
James Barker	741.26
G. Farrell	35.77
Norton & Co.	175.00
H. D. Sears	10.25

Total 7,281.65

Torpedo station, Newport, R. I., December 10, 1901:

Samuel Butler & Co.	662.48
Wm. J. Bannerman	61.65
Wm. J. Dunn	3,628.31
Thomas Butler & Co.	483.91

Total 4,836.35

Navy-Yard, New York, N. Y., September 28, 1901:

Dreifus & Co.	104.50
W. S. Kirk	189.46
A. Solomon	103.30
F. Bannerman	319.99
Chas. Seligman	29.83
W. J. Bannerman	644.51
F. Crawford	102.76
Kirtland Brothers	56.00
A. V. Kaiser & Co.	1,618.93
P. Murray	172.00
Walsh's Sons & Co.	601.27
J. J. Mahoney	13.61
J. M. Briggs	355.60
R. G. Packard & Co.	214.80
Lehman Brothers	35.00
J. Comery	1.13
C. C. Force & Son	4.50
Burrell Brothers	19.00
M. J. Coleman	21.49
Kent Machine Works	47.00
Albert Cohen	20.00
W. H. Harrison	139.60
C. A. E. Fiscune	126.63
V. Pugnacci	150.00
W. J. Carshore	26.00
F. B. Archer	25.00
S. J. McNeal	20.00
H. Pigg	47.00
C. B. Scudder	60.00
D. Kahnweiler's Sons	7.90
C. Seligman	15.21
Henry Weiner	5.74
E. J. Keane	15.00
B. London	152.30
John H. Hoyer	20.26
D. F. Davids	56.00
J. Burcher	66.40
Chas. B. Allyn	15.00
J. F. Sullivan	7.50
J. Flanagan	36.75
A. B. Fleet	7.50
J. McKnight	7.50
J. A. Haller	12.25
Harris Abrahams	9.75

Total 5,703.97

Navy-yard, New York, N. Y., March 26, 1902:

B. B. Abrahams	\$141.06
J. Dreifus & Co.	148.23
Dreifus & Co.	331.98
W. S. Kirk	804.47
L. Cleary	77.00
J. J. Burrell	48.63
J. C. Abbey	278.29
Walsh Sons & Co.	45.37
M. Dunne & Co.	102.34
D. Connelly	108.71
H. Oldeman	319.09
L. C. Pontez	132.84
S. Pearlman & M. Black	28.88
J. J. Mahoney	884.88
C. J. Godfrey	393.29
J. R. Ford	75.00
R. G. Packard	195.24
J. M. Briggs	359.25
T. J. Reilly	2,084.73
G. E. Steengrafe	30.00
R. G. Packard & Co.	91.06
H. Arrowsmith	56.25
E. E. Garritson	58.50
J. Cosgrove & Son	532.50
Miller Brothers	31.17
J. A. Mason	15.75

Total 6,874.51

Navy-yard, League Island, Pa., July 11, 1901:

Dreifus & Co.	216.60
W. E. McAvoy	28.50
G. Papenheimer	466.00
H. A. Hitner's Sons	3,599.89
Mason & Levene	218.50
John J. Chaulk	95.38
A. V. Kaiser & Co.	45.13
James Burcher	82.50

Total 4,752.50

Navy-yard, Washington, D. C., February 11, 1902:

E. H. Wilson & Co.	15,863.66
Mark Lissberger & Son	4,756.33
Lewis Hopfenmaier	86.50
New York and Brooklyn Machinery Depot	9,762.52
H. Wehr Co.	5,755.19
Martin Reynolds	30,301.43
N. Frank & Sons	1,682.50
Wm. J. Bannerman	12.65
Benjamin Einstein	203.00
J. Dreifus & Co.	1,098.44
E. J. Einstein	113.00
Thomas A. Ellis	11.08
N. B. Woolford	70.52

Total 69,716.82

Naval proving ground, Indian Head, Md., August 29, 1901:

J. W. Boaman	4.50
Frank Mattes	30.00

Total 34.50

Naval proving ground, Indian Head, Md., September 4, 1901:

S. K. Behrend	4,427.65
A. V. Kaiser Co.	381.72

Total ,809.37

Naval proving ground, Indian Head, Md., September 5, 1901:

Wm. H. Gaskins	524.40
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Naval proving ground, Indian Head, Md., June 30, 1902:

Baltimore Cooperage Co.	1,310.00
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Navy-yard, Norfolk, Va., September 12, 1901:

E. F. Kearns	731.75
D. E. McAvoy	27.75
J. Dreifus & Co.	2,795.92

*List of purchases, with amount received from each—Continued.***Navy-Yard, Norfolk, Va., etc.—Cont'd.**

M. T. Cashin	\$189.82
H. A. Hitner's Sons	1,020.82
H. Bernheimer	115.62
Benj. Einstein	99.00
John W. Betts	88.00
Oscar Baum	87.50
W. D. Northrop	28.55
R. S. Armstrong	415.00
Frank Toomey	105.00
A. T. Naw	38.00
Richard Curtis	14.00
J. E. Bowen	307.71
Chas. Seligman	84.60
B. B. Abraham	969.55
W. H. H. Cory	35.15
James Burcher	15.00
N. Frank & Son	18.00
N. B. Woolford	367.60
W. J. Bannerman	201.47
F. Samuel	2,954.89
O'Conner Brothers	477.88
A. H. Lindsay	25.55
E. H. Wilson & Co.	50.50
M. P. Coleman	55.50
Fred Creamer	152.00
S. J. McArdle	3,961.16
J. L. Schmidt	342.05
T. J. Reilly	1,794.59

Total 17,568.93

Navy-yard, Norfolk, Va., October 28, 1901:

M. T. Cashin 177.00

Navy-yard, Norfolk, Va., February 14, 1902:

O. L. Williams 101.00

Navy-yard, Pensacola, Fla., March 15, 1902:

H. M. Barr 47.00
Thos. J. Campbell 787.58
David Hirschovitz 3.00
E. Motta 16.00
Swartz Foundry Co., Limited 879.00

Total 1,732.58

Navy-yard, Pensacola, Fla., April 30, 1902:

G. D. Jackson 21.60

Navy-yard, Mare Island, Cal., August 26, 1901:

Moore-Hess Metal Co. 314.44

Navy-yard, Mare Island, Cal., November 11, 1901:

J. L. Baumarten 15.00
B. F. Ballenger 5.50
B. Wechter 46.50
E. Cohen 17.75
Oscar S. Meyzel & Sons 1.50
S. S. Henderson 2.25
J. Silver25
James Robertson 21.00

Total 109.75

Naval station, Havana, Cuba, June 3, 1902:

Barker Mercantile Co 125.00

Naval station, Cavite, P. I., November 29, 1901:

Lee Kim 61.00
H. J. Marche 131.00
Darrah 96.00
F. Ferriez 15.00
Valmas 30.00

Total 333.00

Naval station, Cavite, P. I., February 28, 1902:

Sun Hico 15.04
Marsh 44.45
Syn Yoko 1.35

Naval station, P. I., etc.—Continued.

Chaco	\$5.39
Antonio Yap	1.80
Kerman	23.12
B. Amado	112.92
Changlan	3.14
Kendt	807.75
Darrah	1.35
Rionda	9.43
Nicolas Catalina	30.75
Chamelan	206.99
Demetria Villamarin	35.92
Marcias Juan	3.37
Osorio	10.33
Collins	8.08
Eugenio Ramos	4.94
Lladra	46.25
Cuenca	9.88

Total 1,382.25

Erie, Pa., March 13, 1902:

Frank Seigel 106.00
Amos Wesley 36.00

Total 142.00

Sidney, N. S. W., U. S. S. *Glacier*, March 21, 1902:

Thomas Playfair 382.02

*Sales of homing pigeons:***Navy-yard, Portsmouth, N. H., December 30, 1901:**

E. T. Pierce 9.00
Leon T. Young 7.75

16.75

Naval Training Station, Newport, R. I., January, 1902:

Louis Servant 6.05

Navy-yard, New York, N. Y., December 30, 1901:

J. H. Glass 6.00
Geo. Smith 3.00
Frank C. Schaefer 25.00
John Hay Gilbert 3.42
James E. Brown 2.63
Geo. G. Hallock, jr. 4.50

44.55

Navy-yard, Norfolk, Va., March 3, 1902:

Chas. H. Behre 6.00
Louis J. Morris 14.58
R. E. Meiggs 9.99
Howard Tilghman 3.00

33.57

Naval Station, Key West, Fla., December 30, 1901, and January 29, 1902:

Chas. C. Petty 13.50
Wm. H. Williams 5.00
James H. Carey 45.00
P. E. Hoffmann 5.50

69.00

Navy-yard, Mare Island, Cal., January 11, 1902, and February 11, 1902:

H. W. Johnson 10.00
J. M. Richards 2.30

12.30

Total sales of homing pigeons.... 182.22

Condemned vessel sold August 12, 1901:

U. S. S. *Minnesota*, Thomas Butler & Co. 25,738.38

Condemned vessel sold December 4, 1901:

U. S. monitor *Catskill*, L. E. Lunt... 11,788.00

Condemned vessels sold March 5, 1902:

U. S. monitor *Manhattan*, H. A. Hitner's Sons 15,218.00

U. S. monitor *Mahopac*, A. V. Kaiser & Co 15,218.00

Condemned vessel sold April 15, 1902:

U. S. S. *Vermont*, L. E. Lunt..... 15,658.00

Schedule of proposals for supplies for the navy-yard, Norfolk, Va., under Bureau advertisement dated June 11, 1901; opened July 2, 1901—Continued.

21. American News Co., 39 Chambers street New York City.
22. James Langmuir, 117 Fulton street, New York City.
23. Wm. G. Stevenson, 132 S. 2d street, Philadelphia, Pa.
24. Monongahela Iron and Steel Co., Pittsburg, Pa.
25. J. B. Kendall, Washington, D. C.
26. Chas. Este, 20th and Glenwood avenue, Philadelphia, Pa.
27. D. Wallace & Co., 210 East Lexington street, Baltimore, Md.
28. Francis Harral, 85 Chambers street, New York City.
29. Ansonia Brass and Copper Co., 99 John street, New York City.
30. Francis J. Desnoir, P. O. Box 2384, New York City.
31. Waterbury Brass Co., Waterbury, Conn.
32. Frank E. Clark, 1061 Bedford avenue, Brooklyn, N. Y.
33. Merchant & Co., 517 Arch street, Philadelphia, Pa.
34. Benj. Powdermaker, B street northwest, Washington.
35. C. H. Bull, Norfolk, Va.
36. R. P. Rowe, 100 Williams street, New York City.
37. John Greig, 33 Grove street, New York City.
38. John Lucas & Co., 322 Race street, Philadelphia, Pa.
39. Fiske Bros. Refining Co., 59 Water street, New York City.
40. Wetherill & Bro., 126 S. 30th street, Philadelphia, Pa.
41. Crocker-Wheeler Co., Empire, N. J.
42. James Clendenin, 111 South Gay street, Baltimore, Md.
43. Shoemaker & Busch, P. O. Box 1304, Philadelphia, Pa.
44. Randolph-Clowes Co., P. O. Box 105, Waterbury, Conn.
45. H. C. Gable, Lebanon, Pa.
46. Manhattan Brass Co., 332 E. 28th street, New York City.
47. Toch Bros., 468 West Broadway, New York City.
48. F. O. Pierce, 170 Fulton street, New York City.
49. Fox Bros. & Co., 24 Vesey street, New York City.
50. Henry Frank, 40 Spruce street, New York City.
51. Edward A. Temple, 100 Williams street, New York City.
52. The Porter-McNeal Co., Norfolk, Va.
53. Robert Verwig, Godwinsville, Ga.
54. Gamage & Waller, Norfolk, Va.
55. Arthur Koppel, 66 Broad street, New York City.
56. Meurer Bros. Co., 575 Flushing avenue, Brooklyn, N. Y.
57. Manhattan Oil Co., 51 Front street, New York City.
58. D. B. Fleming, 98 Gold street, New York City.
59. Fountain Creek Granite Co., Norfolk, Va.
60. Standard Oil Co., Guardian Trust Building, Baltimore, Md.
61. Mt. Vernon Cotton Duck Co., Continental Trust Building, Baltimore, Md.
62. Atlas Portland Cement Co., 30 Broad street, New York City.
63. Western Electric Co., 57 Bethune street, New York City.
64. General Supply Co., Norfolk, Va.
65. James River Gravel Co., Norfolk, Va.
66. Arthur J. Lockwood, 12 Platt street, New York City.
67. Henry Muller, 603 Water street, Baltimore, Md.
68. Oscar Schlegel, 224 Canal street, New York City.
69. T. J. Rowan, 264 W. 44th street, New York City.
70. J. Spencer Turner Co., 71 Worth street, New York City.
71. Old Dominion Paper Co., Norfolk, Va.
72. Chas. G. Smith & Son, Washington, D. C.
73. Bruce & Cook, 190 Water street, New York City.
74. R. C. Hoffman, P. O. Box O, Baltimore, Md.
- Class 1. Insulating tape—Bidder 6, *\$120; 63, \$129; 1, \$140.
- Class 2. Bolts and nuts—Bidder 45, *\$343; 1, \$350.75; 25, \$354; 2, \$376.50; 19, \$414.25.
- Class 3. Stove bolts—Bidder 19, \$64.09; 2, *\$104.65; 1, \$120.55; 25, \$250.
- Class 4. Steel hull rivets—Bidder 2, *\$118; 45, \$118; 19, \$120; 1, \$236.
- Class 5. Steel boiler rivets—Bidder 2, *\$118; 45, \$118; 19, \$120; 1, \$196.
- Class 6. Corn brooms—Bidder 71, *\$130.80; 19, \$133.80; 5, \$178.20; 67, \$180; 1, \$191.40; 30, \$209.40.
- Class 7. Cotton canvas—Bidder 61, *\$700; 11, \$720; 70, \$724.50.
- Class 8. Black sewing twine—Bidder 5, *\$459; 1, \$947.50.
- Class 9. Buckets, etc.—Bidder 1, *\$859.90; 19, \$950.33; 28, \$1,019.93; 4, \$1,030.91; 5, \$1,077.90; 52, \$1,186.38.
- Class 10. Iron nails, etc.—Bidder 18, *\$243.75; 19, \$249; 11, \$260.25; 1, \$261.50; 49, \$275.45.
- Class 11. Rigging leather—Bidder 1, \$336.60; 50, *\$357; 8, \$409.50; 5, \$451.50; 4, \$459; 25, \$556.75; 23, \$489.
- Class 12. White pine—Bidder 35, *\$3,460; 9, \$3,540; 64, \$3,717.50; 16, \$3,760; 26, \$3,850.
- Class 13. Brass—Bidder 46, *\$420.44; 18, \$425.64; 7, \$445.74; 5, \$490.83; 29, \$490.83; 31, \$490.83; 44, \$516.33.
- Class 14. Copper—Bidder 5, *\$364.40; 7, \$364.40; 29, \$364.40; 31, \$364.40; 42, \$364.40; 73, \$364.40; 19, \$382.20; 25, \$382.20; 56, \$382.20; 52, \$382.70; 1, \$400.
- Class 15. Bar iron—Bidder 24, *\$1,292.50.
- Class 16. Galvanized steel—Bidder 11, *\$448.20; 19, \$450.72; 56, \$457.20; 66, \$464.40; 51, \$507.60; 25, \$515.52.
- Class 17. Sheet lead—Bidder 19, *\$196.90; 33, \$200.45; 18, \$202.27; 52, \$204.06; 73, \$205.85; 56, \$214.80; 1, \$220.77.
- Class 18. Rolled sheet zinc—Bidder 25, *\$451.50; 56, \$462; 73, \$470.40; 18, \$483; 19, \$483; 33, \$487.20; 49, \$497.28; 1, \$518.
- Class 19. Tuck's packing—Bidder 11, *\$204.37; 6, \$225; 1, \$231; 19, \$246; 52, \$253; 25, \$275; 23, \$467.50.
- Class 20. Red lead—Bidder 22, *\$2,699.90; 36, \$3,060; 40, \$3,062.50; 68, \$3,135.
- Class 21. White lead—Bidder 32, *\$4,112.40; 68, \$4,655; 40, \$4,687.50; 36, \$4,965.
- Class 22. White zinc—Bidder 38, *\$1,686.25; 48, \$1,800; 22, \$1,824.95; 69, \$2,000; 68, \$2,250.
- † Class 23. Linseed oil—Bidder 48, \$4,580; 39, \$5,090.
- Class 24. Lard oil—Bidder 60, *\$7,310; 39, \$7,566.66; 34, \$7,899; 14, \$7,990; 57, \$8,800.
- Class 25. Tallow—Bidder 39, *\$255.70; 34, \$275; 58, \$330; 1, \$350.
- Class 26. Turpentine—Bidder 39, *\$2,318; 1, \$2,445; 37, \$2,484.50.
- Class 27. Lubricating grease—Bidder 13, *\$210; 39, \$297; 52, \$300; 60, \$320; 25, \$324.
- Class 28. Glue and venetian red—Bidder 68, *\$250; 22, \$251; 1, \$274; 5, \$280; 47, \$299.50; 52, \$540.
- Class 29. Asphaltum varnish—Bidder 48, *\$168; 11, \$201; 1, \$208.20; 43, \$209.70; 22, \$218; 69, \$222; 68, \$225; 47, \$255; 38, \$270.
- Class 30. Iron elbows—Bidder 52, *\$38; 1, \$44.50; 5, \$57.50; 11, \$58.75; 19, \$77.50.
- Class 31. Oatmeal—Bidder 5, *\$95.
- Class 32. Sheet grommets—Bidder 6, *\$215; 5, \$222; 3, \$241; 19, \$244.96; 52, \$253.50; 4, \$280.30; 1, \$342; 31, informal, bid on part of class only.
- Class 33. Rubber bands, &c.—Bidder 71, *\$495.75; 21, informal.

* Accepted.

Schedule of proposals for supplies for the navy-yard, Norfolk, Va., under Bureau advertisement dated June 11, 1901; opened July 2, 1901—Continued.

- Class 34. Axes, &c.—Bidder 28, *\$941.88; 1, \$1,058.55; 19, \$1,084.84; 5, \$1,151.30.
- Class 35. Granulated cork—Bidder 52, *\$77.50; 19, \$80; 43, \$95; 1, \$99; 37, \$107.40.
- Class 36. Steel plates and bars—Bidder 19, \$273.30; 74, *\$411.39; 25, \$422; 11, \$433.45; 66, \$512.
- Class 37. Portland cement—Bidder 17, *\$596; 64, \$644; 62, \$680; 27, \$700; 39, \$800.
- Class 38. Broken granite—Bidder 65, *\$720; 64, \$739.60; 59, \$768; 27, \$800; 72, \$832.
- Class 39. Clean sharp sand—Bidder 64, *\$238.50; 27, \$450.
- Class 40. Pine piles—Bidder 35, *\$812.50, 15, \$975; 64, \$997.50; 12, \$1,000; 53, \$1,750.
- Class 41. Pine piles—Bidder 64, *\$1,540.70.
- Class 42. Steel rails—Bidder 74, *\$499.50; 25, \$555.
- Class 43. Terra-cotta pipe—Bidder 1, *\$121.50; 5, \$127.80; 52, \$138; 25, \$156.70; 18, \$157; 27, \$174; 10, \$90.16, informal, no guarantee.
- Class 44. Track bolts, nuts, etc.—Bidder 49, *\$1,055.48; 3, \$1,068.10; 25, \$1,166.60; 74, \$1,270; 5, \$1,399; 55, \$1,399; 19, \$1,488.14.
- Class 45. Cross-ties—Bidder 15, *\$700; 35, \$740; 64, \$850.
- Class 46. Steel rails—Bidder 3, \$2,761.60, informal; 25, *\$2,960; 74, \$3,299.20.
- Class 47. Steel angle bars—Bidder 74, *\$1,199.60; 19, \$2,122.63; 25, \$2,145; 3, \$2,413.12, informal.
- Class 48. Electric hoist—Bidder 11, *\$1,033.50 and \$1,237.50.
- Class 49. Electric motor—Bidder 20, *\$160; 41, \$175; 63, \$188.
- Class 50. Electric motor—Bidder 20, *\$220; 63, \$414.

Schedule of proposals for lumber for the navy-yard, Cavite, P. I., under Bureau advertisement dated June 5, 1901; opened July 9, 1901.

- Bidder 1. Pope & Talbert, 314 California street, San Francisco, Cal.
2. Duke & Smith, Norfolk, Va.
3. A. S. Carman, Vallejo Junction, Cal.
4. James McCudden, 73 Georgia street, Vallejo, Cal.
5. Henry W. Peabody & Co., 222 Sansome street, San Francisco, Cal.
6. Charles O. Regan, 24th street dock, Brooklyn, N. Y.
- Class 1. Lumber—Bidder 3, \$52,886; time of delivery 125 days, and *\$53,813.50; time, 90 days; 1, \$56,821, time 120 days; 4, \$57,148, time about Sept. 20, 1901, or 90 days from date of award; 5, \$59,740, time 65 and 125 days; 2, \$90,510, time, 120 days; 6, informal, part of class.

Schedule of proposals for supplies for the navy-yard, Puget Sound, Wash., under Bureau advertisement dated June 6, 1901; opened July 9, 1901.

- Bidder 1. Hazard Manufacturing Co., 50 Dey street, New York City.
2. Stimpson Mill Co., Ballard, Wash.
3. Puget Lumber Co., Port Gamble, Wash.
4. Northwest Fixture Co., Seattle, Wash.
5. Dormitzer Co., New York Building, Seattle, Wash.
6. Swachbacher Hardware Co., Seattle, Wash.
7. Port Orchard Lumber and Transportation Co., Bremerton, Wash.
8. John M. Klein Electrical Works, 421 Montgomery street, San Francisco.
9. Frank W. Baker, Seattle, Wash.
10. A. S. Carman, Vallejo, Cal.
11. Western Electric Co., 57 Bethune street, New York City.
12. General Electric Co., Schenectady, N. Y.
13. Lambert-Schmidt Telephone Manufacturing Co., 325 Broadway, New York.
14. St. Paul and Tacoma Lumber Co., Seattle, Wash.
- Class 1. Steel wire nails—Bidder, 9, *\$130; 6, \$132.
- Class 2. Fir lumber—Bidder 14, *\$2,517.50; 7, \$2,820; 2, \$2,830.50; 3, \$3,077, informal; 10, \$3,246.50.
- Class 3. Switch board—Bidder 13, \$1,246.50; 8, *\$1,915; 4, \$2,324.50; 5, \$2,350.
- Class 4. Wire—Bidder 12, *\$2,089.50 and \$2,223.50; 4, \$2,170; 5, \$2,188.75; 11, \$2,207.50; 8, \$2,298.50; 1, \$2,333.

Schedule of proposals for supplies for the navy-yard, New York, under Bureau advertisement dated June 24, 1901; opened July 9, 1901.

- Bidder 1. Eureka Cement Co., 1 Madison avenue, New York City.
2. Charles J. Coir, 612 Bourse Building, Philadelphia, Pa.
3. Western Electric Co., 57 Bethune street, New York City.
4. Bethlehem Steel Co., South Bethlehem, Pa.
5. Manhattan Oil Co., 51 Front street, New York City.
6. Dannat & Pell, 6 Broome street, New York City.
7. Watson & Pittinger, 412 Carrol street, Brooklyn, N. Y.
8. A. J. Adams & Co., 130 Greenpoint avenue, Brooklyn, N. Y.
9. R. C. Hoffman & Co., P. O. Box O, Baltimore, Md.
10. Willi O. Howenstein, Washington, D. C.
11. American Distributing Co., 165 Pearl street, New York City.
12. East Side Lumber Co., 504 East Houston street, New York City.
13. General Incandescent Arc Light Co., 572 First avenue, New York City.
14. Arthur J. Lockwood, 12 Platt street, New York City.
15. H. Rosenthal & Bro., 418 West Broadway, New York City.
16. Atlas Portland Cement Co., 30 Broad street, New York City.
17. Midvale Steel Co., Box 1606, Philadelphia, Pa.
18. Shoemaker & Busch, 511 Arch street, Philadelphia, Pa.
19. John Greig, 33 Grove street, New York City.
20. Edmund D. Congdon, 100 William street, New York City.
21. F. O. Boyd, 59 Broad street, New York City.
22. Hiram Snyder & Co., 229 Broadway, New York City.
23. Manhattan Supply Co., 160 Duane street, New York City.
24. General Electric Co., 44 Broad street, New York City.
25. Hanlon & Goodman, 57 Fulton street, New York City.
26. Murtagh & McCarty, Rivington, Tompkins and East streets, New York City.

* Accepted.

REPORT

OF THE

SURGEON-GENERAL U. S. NAVY.

DEPARTMENT OF THE NAVY,
BUREAU OF MEDICINE AND SURGERY,
Washington, D. C., October 1, 1902.

SIR: In obedience to instructions contained in Department's letter of July 3, 1902, I have the honor to submit a report of the operations of this Bureau for the past year, accompanied by a set of annual estimates for the fiscal year ending June 30, 1904, and a statistical report showing the health of the Navy for the year 1901. The report also embraces a statement of the condition of the naval hospital fund, the naval medical establishment, and other matters of interest pertaining to the Bureau of Medicine and Surgery.

The operations of this Bureau during that part of the fiscal year from June 30, 1901, to January 25, 1902, were conducted by my predecessor, Surg. Gen. W. K. Van Reypen, U. S. Navy, who retired from active service in the Navy on the latter date. From January 25 to February 10 the affairs of the Bureau were under the direction of Surg. J. D. Gatewood, U. S. Navy, acting chief of Bureau. My administration, therefore, covers that part of the year from February 10, the date of my taking the oath of office as chief of the Bureau of Medicine and Surgery, to the end of the fiscal year.

NAVAL HOSPITAL FUND.

The condition of this fund is as follows:

Balance on hand July 1, 1901.....	\$180,797.16
Transferred to the credit since July 1, 1901.....	208,901.00
Credit by appropriation for fiscal year 1901.....	40,000.00
Total	429,698.16
Expended since July 1, 1901	205,818.10
Balance on hand June 30, 1902.....	223,880.06

INCREASED ESTIMATES.

Immediately upon assuming charge of the conduct of the business of the Bureau, I was confronted by the fact that insufficient estimates for the year ending June 30, 1903, had been submitted to Congress. The enlarged expenses incident to the increase of the personnel of the Navy, and to the establishment of new naval stations outside the continental limits of the United States, had caused a deficiency of \$40,000 for the

fiscal year 1902, but the estimate for 1903 had not been increased in keeping with this growing demand on the Bureau, as evidenced by this large deficiency—a deficiency of more than one-third of the original estimate for 1902. It became necessary therefore to recommend at once that Congress be asked to increase the appropriations for the Bureau for 1903 over those for 1902 to the extent of this deficiency, and an estimate was submitted raising the amount from \$95,000 to \$125,000 under the head of "Medical department," and from \$20,000 to \$30,000 under that of "Repairs, medicine, and surgery." Congress, recognizing the necessity for this increase, granted it.

URGENT NEED OF AN INCREASE IN THE NUMBER OF MEDICAL OFFICERS.

Attention is urgently invited to the almost imperative demand for an increase in the Medical Corps of the Navy, brought into existence by the growth of the service in personnel and material in the past few years. The following table graphically shows the disproportion between the increase in the work that medical officers are called upon to perform and the number provided to accomplish it:

Relative increase of Medical Corps and of medical and surgical work in the Navy and Marine Corps between the years 1897 and 1901.

	Per cent.
Increase in the Medical Corps.....	15
Increase in actual strength of Navy and Marine Corps.....	70
Increase in number of admissions to sick list.....	75
Increase in total number of sick days.....	95
Increase in number of patients treated in naval hospitals.....	137
Increase in number of medical surveys held.....	174
Increase in number of persons examined for enlistment.....	103

Statistics showing recent general increase in medical and surgical work in the Navy and Marine Corps.

	1897.	1899.	1900.	1901.
Average strength of Navy and Marine Corps.....	15,734	20,819	23,756	26,973
Number of admissions to sick list.....	11,395	15,749	18,936	20,013
Total number of sick days.....	165,741	235,725	291,934	323,931
Number of patients in naval hospitals.....	2,099	3,377	4,428	4,966
Number of medical surveys.....	695	1,128	1,741	1,906
Number of persons examined for enlistment.....	11,633	17,424	25,061	23,678

^a Total number authorized at present time is 37,170; actual strength July 1, 1902, is 30,356.

That the duties falling to the lot of the officers of the Medical Corps have been performed without failure is a circumstance worthy of commendation, but a continuance of this condition can scarcely be promised with the need of greater numbers growing more urgent as is indicated by the plan of increase of the Navy as a whole. Hospitals with twice as many patients as in 1897 now have fewer surgeons to care for them; cruisers and other vessels at sea have had their quota of medical officers cut down one-third or one-half; important shore stations where skilled physicians should be stationed must depend upon the partial training of a pharmacist. Recruiting work in many places is performed by civilians without special knowledge of naval requirements, resulting in loss to the Government from the selection of physically undesirable men.

this work means much more than nursing. All the conditions of handling disabled and wounded in war are to be met in such a course of instruction, together with the study of remedies, the cooking of food for the sick, the preparation of returns and reports, the meaning of discipline and military organization, and last, but not least, the hospital care of the sick.

In order to establish a systematic scheme of training that will be uniform throughout the service, the Bureau has had prepared a plan of education and drill, based upon that in successful operation at the Army Training School, and modified to meet the requirements of both sea and shore work, which is now in effect at the naval hospital, Norfolk, Va., where some forty members of the Hospital Corps are under training. A Hospital Corps Drill Manual has also been compiled under direction of the Bureau, and has been approved by the Department. This book will be used in preparing the members of the Hospital Corps for the military demands of their duties and in teaching them the method of handling wounded and disabled in the field and on shipboard. The development of this training school will be watched and guarded with most careful attention by the Bureau. It is also essential that the drill and training of the Hospital Corps should continue during the service of its members after leaving the school of instruction, on shipboard and on shore stations. Medical officers should be required to carry on the plan of instruction in drill and study periods prescribed by their commanding officers, and these should be considered as much a part of the routine of the ship or station as drills of any other character for other divisions of its complement. The Bureau has under consideration plans to secure a uniform system of training adjusted to the conditions of the different duties afloat and ashore, and it is expected that the adoption of this, following the preliminary education received at the training school, will secure for the Navy a trained Hospital Corps of which the service may be proud.

SICK QUARTERS ON SHIPBOARD.

The space allotted for hospital purposes on our modern vessels of war and its location therein has not been in keeping with the great advances made in the construction and selection of the other living spaces. Much has been done in the way of perfecting the sanitary condition of the ships and of adding to the comfort and health of the ship's company, but the improvements for the care of the sick and wounded have hardly been in the same proportion. While it is borne in mind that all other considerations must be held secondary to the fighting efficiency of the ships, the care of the most important element of the combative body, the personnel, demands a prominent place, and in this the moral effect plays more than a secondary part to the physical. It is believed from study and comparison that much remains to be done toward effecting an improvement in ships' hospitals, and especially in their location, and that this can best be brought about by giving this Bureau an opportunity to act in an advisory capacity at the time the plans of new vessels are laid down. It would seem as if those who are to use the tools would be the ones best qualified to advise in their making.

A comparison of the hospital facilities of the Russian ship *Retvizan* with those of the *Maine*, built side by side in the shipyard of Cramp

& Sons, in Philadelphia, gave a result much to the advantage of the foreigner. Modern shore hospitals were studied and experts in hospital construction consulted in the adaptation of hospital requirements to ships' restrictions in the building of the sick quarters of this vessel.

In an indorsement dated April 17, 1902, on a request of this Bureau for an opportunity to advise in matters pertaining to the care of the sick and the maintenance of health in the preparation of plans of new ships and in extensive alterations of old, the Department directed that the Bureau of Medicine and Surgery be called in consultation in all such matters in an advisory capacity. The Bureau of Construction and Repair has been most courteous in affording this Bureau the opportunities deemed essential, and many satisfactory advances have already been planned in these particulars in vessels under construction. A most important problem is the care of the sick of vessels carrying large crews—that of the segregation of those afflicted with contagious diseases—has been worked out under this order, and an isolation ward has been provided for on the new battle ships and large cruisers. The installation of modern operating rooms on these classes of vessels has been another improvement of note in the hospital facilities made possible by the Department's action in this matter.

That the desire of the Bureau to be consulted on this subject of the planning of quarters for the sick is not recent is shown in the report of the Surgeon-General of the Navy for the year ending June 30, 1894, in which it is suggested that the Bureau of Medicine and Surgery be consulted before space for sick quarters be assigned to vessels under construction.

AMBULANCE AND HOSPITAL SHIPS.

As early as 1895 the subject of the care of the wounded afloat, by means of ambulance and hospital ships, began to take a prominent place in the thoughts of medical officers of the Navy. Surgeon-General Tryon, in his report to the Secretary of the Navy in 1895, first called attention to the value, importance, and range of action of this method of handling the wounded of a naval engagement. Rear-Admiral W. K. Van Reypen, in the Surgeon-General's report for 1897, has an article on "The handling of the sick and wounded in action," in which he emphasizes the need of an ambulance or hospital ship.

The work of the *Solace* and the *Bay State*, of the Navy, and the *Relief, Missouri*, and hospital transports, of the Army, is of too recent date to need more than mention. Their value can not be questioned for a moment, and from such experience it would seem that the point had been reached in the growth of our naval establishment where a permanent hospital ship was a necessary adjunct to a fleet or station (and by hospital ship is meant one that is equipped for hospital purposes only and has the right to fly the flag of the Geneva Conference). In time of peace this vessel of mercy would act with the large squadrons during the more serious evolutions, both as a hospital and a recreation asylum for debilitated members of the ships' companies, and during times of less activity could serve the purpose of an ambulance ship to carry the disabled from the near and foreign fleets, and from the island stations, to the naval hospitals. Two vessels of this type, of moderate size, one for the Atlantic and one for the Pacific, could do

great and humane work in time of peace, and with the advent of war would be ready for instant service with the first fleet prepared for action.

The late efforts to secure a hospital ship for the winter maneuvers in the West Indies show conclusively how difficult it is to secure action until the time of need arrives, and how easy it is then to take everything for other purposes and leave the medical officer to combat the emergencies as they arise with what may be at hand. This is discouraging to the medical officer, but it is more than discouraging to the sick and wounded.

NEW FIELD EQUIPMENT.

. The experience gained in the operations of the Navy and the Marine Corps in China and the Philippines has made prominent the need of a more extensive expeditionary equipment for the medical department than has been heretofore supplied.

Prior to 1898 the shore operations of the service had not been on a scale requiring much more than what might be termed an emergency outfit. The large increase in the Marine Corps and the call for its services in the East has placed several battalions in the field in active service, and it has been found necessary to largely increase the medical and surgical supplies of these detachments. The Bureau is perfecting a uniform outfit for field work, to be issued as an allowance to fleets, to be carried on flagships, and to marine battalions in the field, which it plans to have ready for issue in a short time. The need of assembling a sufficient allowance in the small compass demanded by the restricted stowage space of ships, and by uncertain means of transportation on shore, makes this a somewhat difficult problem. Several experienced medical officers, under the direction of the Bureau, have been making a study of the needs arising from this enlarged field of operation of the naval force, and as a result of their work it will soon be possible to furnish more adequate supplies for expeditions on shore.

BUREAU REPRESENTATION ON THE GENERAL BOARD, BOARDS OF CONSTRUCTION, AND INSPECTION BOARDS.

The attention of the Bureau has been attracted, in the routine performance of its duties through the year, to the desirability of having a representative of the Medical Corps on the boards dealing with the problems of construction, inspection, and general policy of the Navy. Many and important questions affecting the health and well-being of the most essential element of the combative organization, the personnel, are considered by these boards, and it would seem to be for the best interests of the Government and the service that the advice of men trained in the care of the physical condition of this element, and provided by law and regulations for that purpose, should be utilized, at least in an advisory capacity. It is the opinion of this Bureau that it would be to the advantage of the service to have all questions involving the sanitation of a vessel considered, and, as far as possible, worked out in the preparation of the plans of that structure. Ventilation, drainage, housing, and berthing of the crew, storage of food and water, location and character of sick quarters, heating and lighting, are subjects upon which the medical officer, by education, train-

ing, and experience, is fitted to give advice. As a general rule, to-day, he does not meet these problems until he is ordered for duty on the ship, completed and ready for commission, and one of his first acts of duty is to make a report dealing with defects in all these particulars, defects which not infrequently involve great expense to remedy, and sometimes are impossible of change. It would seem wiser to begin at the beginning.

In the inspection of ships and stations there are many questions wholly within the province of the sanitarian to investigate and report upon, and which it would be of importance to the well-being of the personnel to have answered.

The General Board might avail itself with advantage of the advice of officers educated in sanitary science afloat and ashore in the consideration of the broad questions of harbors for bases and refuge, naval and coaling stations, and of camp sites, of climatic influences for good or evil, and of the prevention or control of possible or threatened epidemics of disease. The choice and physical development of the raw material of the personnel, consideration of the human factor in the selection of the different types of vessels of war and of other war material, the adaptability of clothing and food to the demands of unusual conditions, and of changed conditions brought into existence by the evolution of the materiel, are among many subjects upon which the medical officer is fitted to advise. It is difficult to see wherein anything but good could come from the cooperation of this Bureau in the work of all boards of the character of those under consideration.

REGULATIONS FOR THE APPOINTMENT OF PHARMACISTS.

It has been the custom in the selection of hospital stewards to fill vacancies in the grade of pharmacist, as provided by act of Congress, dated June 17, 1898, to make the professional examination largely one of record, based upon length of service and the recommendations of medical officers with whom the candidate has served. This was not considered for the best interests of the Hospital Corps, or of the service, and the Department, under General Order No. 88, of April 28, 1902, changed the existing rule and ordered that hereafter hospital stewards selected for promotion shall be required to pass a satisfactory examination before a board to determine their mental, moral, physical, and professional fitness for appointment as pharmacist.

This not only will have a tendency to stimulate the hospital steward to increase his professional knowledge and so raise the standard of pharmacists, but will place him, when promoted, on the same footing as other warrant officers, who are required to show their fitness for appointment to the warrant grade by passing a similar set of examinations. It is expected that good results will come of this change of regulation.

This very important grade of the Hospital Corps could with wisdom be largely increased in numbers. There are now not nearly enough pharmacists to fill the positions which, from their importance, call for men of the years and experience which members of the Hospital Corps must attain to qualify for the warrant grade. It is recommended that legislation be asked to provide for an increase of 25 additional pharmacists, this number being needed to supply hospitals, large stations, and flagships.

WOMEN NURSES FOR NAVAL HOSPITALS.

There has been a growing conviction in the minds of many of the most experienced medical officers of the service, especially since the war with Spain, that the employment of women for the nursing of the sick of our large hospitals would result in greater efficiency than has been obtained heretofore by the use of male nurses alone, and that such employment would not conflict with the conditions arising from the military character of the institutions.

This question has been given careful consideration by the Bureau and by individual medical officers. That women are the superior of men for the work of nursing there can be no question, and the objection that they are not compatible with military conditions can scarcely apply to institutions of the character of our large naval hospitals. Civil hospitals in every country employ women to do the nursing, and for no other reason than that they fill the position of nurse better than men. Naval hospitals do not differ materially from civil institutions for the care of the sick, either in construction or routine, and it is believed that just as good results can be obtained from the use of women nurses in naval hospitals as in civil, and if war should come the Bureau would be much relieved by having women trained nurses in its larger hospitals. This would liberate most of the hospital apprentices for sea service. It can be stated with assurance that if the patients were given their choice of a nurse they would select women in the large majority of cases.

It is recommended, therefore, that Congress be asked to provide at its coming session for the establishment of a woman nurse corps for the Navy, to consist at first of 1 superintendent nurse, 8 head nurses, 16 nurses of the first class, and 24 of the second class, these numbers to be increased at the discretion of the Secretary as the needs of the service indicate.

Medical Inspector J. C. Boyd, United States Navy, has submitted a plan of organization for a woman nurse corps for the Navy. This paper is published in the section of this report reserved for special reports of medical officers.

SANATORIUM FOR THE NAVY FOR THE TREATMENT OF TUBERCULOSIS.

The success of the sanatorium treatment of tuberculosis in this country and in Europe has suggested that much more ought to be done for the succor of those of the naval service afflicted with this dread disease than has been accomplished in the past. Heretofore it has been necessary to either discharge from the service the consumptives of the Navy if they were not in the stage of the disease rendering them wholly helpless or, if suffering from a severe type or in the advanced stages of the malady, to allow them to linger out their last days at some naval hospital without the proper atmospheric environment to offer them a hope for life.

The experiment of the Army Medical Department in establishing a sanatorium for the treatment of tuberculosis at Fort Bayard, N. Mex., an abandoned army post in a locality of high altitude and favorable atmospheric surroundings, has been eminently successful, and the medical officers in charge of the institution have been able to submit most favorable reports.

The Bureau has this subject under consideration and hopes soon to furnish the Department with a plan for the care and treatment of these unfortunates.

BOOK OF INSTRUCTION.

Previous to February 25, 1893, the date of the publication of the Navy Regulations, the Bureau issued to the officers of the Medical Corps a book of instructions which, as its name implies, contained information relative to all the duties of medical officers afloat and ashore. This book was of great value and was a guide that often simplified apparently difficult methods. It not only covered the duties of medical officers in every capacity of duty, in which it went into minute details, but was explanatory of all correspondence, forms, and returns, giving examples of the different regulation blanks. It was considered unnecessary after the issue of the revised regulations; but experience has shown in the years since its abolition that a most valuable aid to the performance of duty was lost in its withdrawal. The Navy up to 1893 had had its book of instructions for medical officers from the early days of the Navy. The Army to-day issues a most comprehensive book of instructions, and the Medical Corps of the Navy finds itself less well equipped in this respect than ten or more years ago. It is designed by the Bureau to again prepare a book of instructions similar to that in use in the Army, simply as explanatory of the regulations, and to illustrate the preparation of the returns of the Medical Department.

OPERATING-ROOM IMPROVEMENTS.

This important subject demanded early attention and action. The great and rapid advances made in modern surgical technique imperatively demanded that much should be done to bring up the operating rooms of our naval hospitals to a higher standard of excellence, if we expected to keep step with our civil contemporaries. The afflicted of the naval service should receive assurance of successful operative interference at least equal to that vouchsafed to the most needy of the civilian citizens of our country.

Since the establishment of aseptic operating rooms in the naval hospitals during the fiscal year 1896, little more than minor repairs have been made to keep pace with the improvements in modern surgical procedure. Most of our hospital operating rooms at that time were fitted in what was not an entirely satisfactory manner even for that period, as shown in the report of the Surgeon-General of the Navy for 1896. This states that enamel paint was used on the floors and walls instead of tiling "on account of the decreased cost." This substitute has not been found durable, and is in fact a menace to perfect security.

In the fall of 1897 the naval hospital at New York was equipped with a new operating room of the most approved pattern for that time, but it was deemed necessary on account of the amount and importance of the operative work performed there to select this institution as the first to receive attention this year. After a careful study of the conditions in connection with the requirements of the surgical work of this hospital, it was found that nearly \$4,500 would be needed to put the operating room in a condition fitting it for the class of operative cases treated there. Recognizing the imperative need of the improvements contemplated, this work has been authorized and com-

pleted, and equips the hospital at New York with an operating room equal to any demands of modern surgical procedure.

The other naval hospitals call for many improvements besides that of reconstructing their operating rooms. Some of them are unsanitary, and require remodeling to adapt them to the growing demands of the service and of modern medical and surgical science, and they will be given attention at as early a date as circumstances will permit.

SURGICAL WORK AT NAVAL HOSPITALS.

The reports of the surgical work returned from the principal naval hospitals for the year present an array of operations covering all branches of surgical interference and of all degrees of importance.

Returns from five hospitals show 345 operations of all classes. Of these 53 were for the radical cure of hernia, with no fatalities, and as far as known all successful to date. There were 25 cases of appendicitis operated upon, with 2 deaths. Seventeen cases of varicocele and 6 of varicose veins were successfully treated by operation, and 41 circumcisions and 26 operations for hemorrhoids take a prominent place in the reports in point of numbers. Two cases of successful trephining of the skull are reported.

The proposed plans for improving the operating rooms of all naval hospitals will so increase the facilities for operative work that it is expected that many more cases will be successfully treated by surgical interference than in previous years.

The following statement shows the number and character of the operations performed at the five principal naval hospitals during the year:

	Cases.
Abscess, incision and curettage	23
Amputations (thigh 1, fingers 5, toes 1)	7
Appendectomies	25
Broncocele	2
Cellulitis, incision and drainage	3
Circumcision	41
Tracheotomy	2
Removal of cysts	2
Cystotomy	2
Fistula in ano	15
Hemorrhoids	26
Herniotomy	53
Hydrocele	4
Inguinal adenitis:	
Dissection	16
Incision and curettage	21
Floating cartilage, knee joint	2
Laparotomy, exploratory	3
Ligation of arteries (external iliac 1, external carotid 1)	2
Necrosis of bone	2
Removal of malignant growths	3
Removal of benign growths	8
Tenotomy	1
Resection of joints	3
Frontal sinus, scraped and drained	1
Tonsillotomy	2
Operations for tuberculosis of glands, bones, and joints	8
Unguis involutus	7
Urethrotomy	5
Varicocele	17
Varicose veins	6

	Cases.
Operation for gunshot wound	1
Testicular abscess	1
Tumor of testis	1
Enucleation of eye	3
Operation for mastoid disease	1
Resection of ribs	5
Skin grafting	2
Trephining skull	2
Epithelioma of tongue	2
Knee joint operation	4
Knee joint dissection	1
Papiloma ani	1
Prolapsus ani	3
Dacrocystitis	1
Excision pterygium	1
Scrotal fistula, urinary	1
Resection for ununited fracture	2
Drainage for empyema	2

HOSPITALS.

NAVAL HOSPITAL, WIDOWS ISLAND, ME.

This small hospital was constructed in 1887 with a view to furnishing accommodations for patients from such vessels as might have been infected with yellow fever, among the large naval force at that time maintained about the Isthmus of Panama. As the conditions then existing no longer prevail, and as there are other facilities to meet such emergencies, the maintenance of this hospital is no longer deemed necessary, and during recent years only such minor repairs have been made as would preserve the buildings from deterioration until their ultimate disposition should be determined upon. This hospital is maintained at an expense of about \$1,000 a year, with no probability that it will ever be used for the care of the sick.

NAVAL HOSPITAL, PORTSMOUTH, N. H.

The following repairs have been made at this hospital during the year: The battery for X-ray apparatus renewed and the machine put in perfect working order. Some excellent photographs have been obtained with it. The new electric-lighting system continues to give entire satisfaction, and is a great improvement over the former illumination by gas. The roofs on the stable and laundry buildings have been put in thorough repair, new tubes have been provided for the two boilers in the steam building to replace those worn out and leaking, two rooms in the main building were freshly painted, the plumbing system was overhauled, and new bricks and grates have been placed in the kitchen range. The ambulance was also thoroughly renovated, and the filter of the hospital cistern was renewed.

There continues to be trouble in obtaining a good water supply. It has been very poor during the year, and although connections will be made to the mains of Kittery, Me., the water thus supplied is not considered to be of good quality.

The new dry dock now in course of construction, and the coal wharves, boiler shop, and other buildings to be erected within a hundred yards of the hospital, render the present site undesirable. This, with the necessity of quite extensive changes and improvements in the hospital building, was evident in a visit lately made to it, but in view

Permanent occupancy of this station will necessitate the erection of a separate building for the care of the sick in accordance with modern principles, and the Bureau is urging that a suitable building be erected as early as possible.

Smallpox has continued to prevail among the Indians in some portions of the Territory, but systematic vaccination has proved effective in stamping out the disease in the immediate vicinity of Sitka.

NAVAL HOSPITAL, CAVITE, P. I.

Owing to the contemplated construction of a new hospital at Canacao and the abandonment of the old building at Cavite, only such changes have been made at the present site as have been required to meet immediate demands. Among these was the addition of a small building for cases of contagious diseases, the prevalence of smallpox and the appearance of occasional cases of plague making this an urgent necessity. Another much-needed improvement consisted in making and equipping a laboratory for clinical work. Living quarters for the ambulance driver were provided, and two stalls for horses and a feed room were built in the corral. Minor repairs were made on the hospital building, and the ambulance, laundry stove, kitchen range, and other accessories were put in order.

NAVAL HOSPITAL, CANACAO, P. I.

The appropriation bill for 1903 provided the sum of \$50,000 for a naval hospital at Canacao, P. I., repairs and improvements in fitting up old buildings and building new, building wharf, and preparing grounds, and establishing a naval hospital at Canacao, P. I., to take the place of the present temporary hospital in Cavite, and for the transfer of public property from the old building to the new.

The plans for reconstructing the old Spanish naval hospital at Canacao, and for building quarters and other outbuildings, repairing wharves and roads, and laying out the grounds are being prepared, and the work has been authorized by the Bureau and will be carried out as expeditiously as circumstances will permit. The needs of the station demand much better facilities for the care of the sick than are now provided at the hospital in Cavite, but with the establishment of this institution at Canacao it is expected that these needs will be fully met.

NAVAL HOSPITAL, YOKOHAMA, JAPAN.

The usefulness of this hospital as a sanitarium for the sick from the tropical portions of this station becomes increasingly apparent now that the completion of the new annex has about doubled the capacity of the institution. Cases of dysentery, beriberi, and the various fevers which tend to become chronic in the tropics, improve rapidly, as a rule, upon transfer to this favorable climate, resulting in their return to duty instead of being invalided to the United States. A number of changes have been made in the old building, and there are now ten rooms of good size, one small room, and a dining room, besides quarters in the annex for three patients, which had been fitted up for the accommodation of sick officers. The frequency of earthquakes

renders necessary many minor repairs to plaster walls, roof tiles, and woodwork, but no serious injury has been done during the past year. The dining room for enlisted men has been recently enlarged one-third, but it is still too small, and at times it has been necessary to serve the meals in two relays. In spite of many repairs the old building is not entirely satisfactory, and it will probably soon be necessary to enlarge and remodel it. The grounds have been kept in good order and present an attractive appearance. A good deal of work has been done upon them, including the erection of a double iron gate at the basement entrance to the annex, raising the height of some of the retaining walls, repairing brick and cement walks and laying new ones, and in keeping the cemetery in good order.

The water supply is now satisfactory; it is drawn from a well 100 feet deep, and forced by a steam pump into two 4,000 gallon redwood tanks. From these tanks water is supplied by gravity to the boiler, laundry, junior medical officer's quarters, kitchen, and lower floor of the old main building, also to a large underground cistern of 40 tons capacity in the yard, which is kept filled for use in case of fire and has pipe connections for three hand force pumps. The annex building is supplied with water from two 300-gallon iron tanks in the attic, which may be filled by a steam pump from the mound tanks, but are actually in connection with the city waterworks. Upon the completion of the water mains on the bluff in January last, one 2-inch pipe was led into the boiler room of the annex building where, by means of a previously planned manifold valve, immediate connection with the pumping system was made, giving at a small expense a good supply of city water. This is of excellent quality, brought from the mountains 11 miles from Yokohama, and has enough pressure to send a stream above the highest roof in the compound. This also obviates the necessity for steam on the boiler for pumping up the tanks.

The annex building authorized by the Department in July, 1900, has finally been completed, after many vexatious delays, and was opened for the reception of patients in January of this year. The building is large, and, owing to its situation on a bluff overlooking the city, presents an imposing appearance. It has withstood, without damage, repeated earthquake shocks, thus indicating the strength of the work and the character of construction. Both gas and electricity may be used for lighting, and the building is heated by steam. The electric light wiring is satisfactory, but there was at first some little trouble with the heating apparatus and gas pipes; these difficulties, however, have been entirely overcome. The operating room is well lighted by two large windows, and, artificially, by clusters of electric lights, and a portable lamp in a reflector above the table. The walls and ceiling are hard finished and painted with white silicate paint. The floor is of hard cement which is brought 18 inches up the walls. The sterilizers for water and dressings are placed in the entryway outside the operating room, and are supplied with water and steam by independent pipes from the boiler room in the basement.

The bathrooms, two on each floor, have iron bath tubs painted with silicate paint, and an abundant supply of water, both from the tanks and from the city waterworks. In each bath tub is a steam pipe for heating the water. The water-closets and urinals are of approved modern construction, with overhead tanks and trapped

drains. In the absence of a general sewer system in Yokohama the disposal of water and excreta proved a troublesome problem. Fortunately, there was already a sewer down the narrow lane leading from the bluff to the canal below. A brick and cement tank was constructed, of about 400 gallons capacity, underground, but on a higher level than the lane, with a large sluice valve near the bottom, projecting through the stone retaining wall into a small recess protected by an iron gate. A siphon drainpipe is let into the side of the tank about halfway up, communicating with the street sewer, which keeps the water level down to its opening. The more solid contents are drawn off by the lower sluice valve by night scavengers, who take it away in specially constructed carts. With the aid of disinfectants this has proved satisfactory. The hospital, other than the annex, is still dependent upon earth closets and the nightly removal of excreta and garbage by scavengers, which is the universal custom in Japan.

Five of the six wards have been equipped and put in use, the rear ward on the first floor having, for the present, been fitted up as a reading and smoking room for convalescent patients. The large space in the attic, the whole length of the building, is plastered and smoothly floored, and would be available for sick quarters in an emergency. A large front room in the basement has been assigned for the marine guard of six men, the sergeant in charge having a small adjoining room for his use. Lockers for clothing, a closet, and a bathroom have been constructed conveniently at hand.

A complete set of modern fittings for the operating room and much of the furniture for the new annex were sent out from the United States by the Bureau, including white enameled-iron bedsteads and bedside lockers, a complete set of laundry machinery, a large sterilizer, boiler, pumps, etc., all of which have since been installed. Other necessary furnishings, as chairs, tables, carpets, and window shades, were obtained in Yokohama.

Out of the authorized expenditure of \$20,000, a sum was set aside to build a small cottage for the junior medical officer, and his former quarters in the old building became available for the use of invalid officers, after such general alterations as were necessary to fit them for the purpose. The new cottage is an attractive frame building of one story and attic, four rooms, two berths, and closets, situated in the southeastern corner of the grounds. It is lighted with combination electric and gas fixtures and is supplied with water.

The importance of this hospital and the urgent need of kitchen and nursing facilities, together with important changes in the older features of the hospital, compel the Bureau to ask for an appropriation of \$25,000 to be made immediately available.

NEW HOSPITAL BUILDING AT THE NAVAL ACADEMY, ANNAPOLIS.

An allotment from the appropriation for the construction of the Naval Academy buildings of \$100,000 has been made by the Department for a hospital for the Academy and the station.

Plans for this structure have been prepared by the architect of the new Academy buildings, which have been submitted to the Bureau. These designs provide for a building which represents the most advanced ideas of modern hospital construction, and if carried out

will provide a hospital for the Naval Academy which will be a model institution of its kind. The Bureau has these designs under consideration, and expects to make a decision upon them at an early date, so that action may be taken in time to have the hospital in readiness for occupancy when the Academy buildings are completed. The needs of the Naval Academy are such that a building for hospital purposes should be provided as early as possible, and it is deemed desirable that one should be erected of such design as to be in keeping with the general architectural scheme of the Academy and its dependencies as now planned and authorized. The Bureau is informed by the architect that this can not be done with the amount authorized, but will require \$200,000. It is requested that this amount be allotted for this purpose in order that the buildings may be built fireproof, and conform to the other buildings of the Academy.

RECEIVING SHIPS.

Of the six receiving ships stationed at the principal navy-yards, four are of the old wooden hulk type. Last year it became necessary to recommend the abandonment of the *Vermont* on account of the dangerously infected condition to which age and the housing of many thousands of men had brought her. With the increased activity in recruiting and the assembling of many men on all the receiving ships, consequent to the enlargement of the naval establishment, the danger of similar contamination of the other wooden vessels is not unlikely to take place. During the summer measles have been prevalent on the *Franklin*, and on account of the difficulty experienced in eradicating this disease the filling of the complement of the training ship *Lancaster* was delayed. The *Richmond*, for a number of years the receiving ship at League Island, was transferred to Norfolk to help the *Franklin* shelter the large number of recruits assembled at that station, and the steel ship *Minneapolis* was pressed into service to fill her place, as the *Columbia*, her sister ship, had been taken to replace the *Vermont* the year before.

The sanitary report of the surgeon of the *Columbia* states that the wisdom of substituting a steel vessel in a sanitary condition for the old wooden *Vermont* is shown by the improved health of the personnel since the transfer was effected, even though the former vessel is not as well ventilated or as spacious as the latter.

These substitutions can, at the best, be considered but temporary expedients and only tend to bring into prominence the much discussed and important question of the most practical and efficient means of sheltering the naval recruit while awaiting assignment to cruising ships and under instruction in naval requirements. The construction of barracks, as recommended by the Department, should be started at as early a date as possible, and the erection of these structures hastened, to meet the rapidly growing demands of the naval service.

The recruiting work of the medical officers of all the receiving ships for the year is represented by the following figures:

Number of persons examined	6, 320
Number accepted.....	3, 489
Number rejected	2, 831

with the museum during the year comprised the examination of 348 specimens of urine; 5 of sputum, bacteriological and microscopic; 2 of blood; 6 of drinking water; 5 of writing inks, and of several miscellaneous materials among which were wood dust, ricin soap, etc., the ricin-soap formula and specimens being furnished by Pharmacist F. T. Gordon, U. S. Navy. A series of comparative tests were made of different forms of formaldehyde generators to determine the effect of the gas as generated directly from wood alcohol and from formalin on different forms of pathogenic microorganisms and the penetrating power of the gas as produced by the different methods. These experiments were exhaustive and required much time and attention, and the results obtained are considered of value and interest to sanitation and hygiene.

One hundred and twenty-three bound books, of which 98 were from donations, were added to the library during the year. A beginning has been made of the very necessary work of bringing the library up to date by the purchase of some of the more recent works on military hygiene, analytical chemistry, and bacteriology. The establishment of the medical school will emphasize the need of largely augmenting the number of modern works on technical scientific subjects and on those relating to medicine and surgery.

Ten complete outfits of microscopes for issue to ships (outfit "C") have been purchased from the Bausch & Lomb Optical Company, of Rochester, N. Y., at a cost of \$83.50 each. Of these six were issued during the year. Three outfits, one each of "A," "B," and "C" were returned, repaired, and reissued. At the suggestion of the medical officer in charge of the museum the manufacturers have substituted in the new issue of outfits a sliding box in place of the perforated shelf formerly used to hold objectives and eyepieces in the case. The latter was frequently split by the weight of the objectives in the transportation of the outfit.

LEPROSY ON THE ISLAND OF GUAM.

The governor of the island of Guam has reported that several cases of leprosy have been discovered on the island, and that these cases are probably the few remaining alive of a number that escaped the sequestration in force under the Spanish Government. During the interregnum between the withdrawal of the Spanish rule and the beginning of the government of the United States an opportunity was afforded for the escape of the unfortunate lepers, of which some of them took advantage. They have been kept in seclusion by the kindly though ignorant people of the island, and have escaped the observation of the authorities up to this time. The establishment of a colony for the segregation of these lepers has been effected at the west end of Tumon Bay, sufficiently distant from any village for the safety of the latter, but within practical reach of Agana, the seat of the government. The place is described as healthy, facing a sweep of clean beach, and while exposed to the winds of typhoons is less liable to destruction from tidal waves than other places under consideration for the location of the colony. Steps have been taken to obtain attendants and nurses from among the religious brotherhoods and sisterhoods, and requests for a supply of the latest and most efficient remedies for the disease have been made.

The buildings comprising the shelter of the colony consist of a number of small houses with thatched roofs, a hospital building, mess-room, kitchen, chapel, and a sewered latrine. There is also a modest building for the superintendent and watchman, and small plot of ground has been selected for a cemetery. This latter has been consecrated by the padre.

A general order has been issued by the governor defining the institution as the Tumon Bay Colony, and prescribing its limits and the laws regarding it. These regulations have been so framed as to prevent any possibility of a person being sent there on a mistaken diagnosis. It is thought that the number of lepers who will go immediately to the colony will approximate 25.

CHOLERA IN MANILA.

Cholera made its appearance in Manila in the latter part of March, and was reported under date of March 25. Up to April 1 there had been 9 cases in Manila, with a death rate of 75 per cent, but with the number of new cases steadily decreasing.

Manila was placed under strict quarantine, and no one was allowed to leave the city for the provinces without permission of the board of health. Vessels about to leave for other ports were required to remain in quarantine for five days before sailing.

A fatal case occurring in Cavite market, the market, shacks, and everything included therein were burned by order of the board of health. The *Iris* was immediately brought into requisition for distilling water for the naval station, and under an allotment of \$500 from the emergency fund, Navy Department, 1902, a disinfecting house was erected. By the 15th of April the disease was reported as decreasing and under control in Manila, but spreading into the provinces, one case being discovered in Bacoor.

On the 13th of May the death from cholera of two marines at Moron, with a report of two other cases there, was cabled. Assistant Surgeon Odell was dispatched to Moron, and Assistant Surgeon Oman to Olongapo.

News from the Subic Bay naval reservation, under date of May 20th, was to the effect that no further cases had occurred at Moron, but that at Bagal, the southernmost town, there had been 47 deaths from the disease. There had been also one case on the *Mariveles* while she was hauled up on the ways at the naval station. The commanding officer and the crew of the *Mariveles* were segregated in a temporary camp near the old Spanish hospital, and the ship disinfected. Assistant Surgeon Odell was ordered to Bagal to disinfect the village.

The reports from Manila early in June were less favorable than in the previous months, the epidemic of cholera having assumed more alarming proportions at that place. At Bacoor two officers, Lieutenant Rask, of the Marine Corps, and Assistant Surgeon Dunn were siezed with the disease on the 30th of May, the former dying the same day. Dr. Dunn recovered. On June 2 Maj. Randolph Dickins, of the Marine Corps, became seriously ill of cholera at the same place, but ultimately recovered.

On the 28th of May Warrant Machinist Dittrich died of cholera at Cavite, being buried the same day at Canacao. There were three

deaths on the 28th in Cavite, and seven on the 7th in Cavite and San Roque.

The governor of Subic Bay reservation reported June 10 that that station was in a clean and healthy condition, except Bagal, which had suffered severely from cholera. At Moron the disease seemed to have disappeared at this date. In Cavite new cases and deaths still occurred. A private marine died in Cavite barracks on June 10. The disease was still prevalent among the natives at Cavite, San Roque, and Caridad, and the weather conditions were not favorable for a decrease. The latest reports show that the epidemic had subsided about Manila on the 1st of July.

It was with great regret that this Bureau was not able to recommend the detachment of Surg. W. F. Arnold, U. S. Navy, from duty with the Navy, and his assignment with the Army for special work as a cholera expert at Manila, as requested by the War Department. The small number of medical officers in the Navy in proportion to the amount of work required of them by the naval establishment rendered this impossible at that time.

NAVY PENSIONS.

The following is a statement of the work performed by the pension division of the Bureau during the fiscal year ending June 30, 1902:

Pension cases remaining on hand June 30, 1901	3
Received during fiscal year ending June 30, 1902	1,846
Answered during fiscal year ending June 30, 1902	1,831
Remaining on hand June 30, 1902	15
Cases for board of medical examiners received and answered	291
Cases for retiring board received and answered	31
Reports of deaths received	257
Reports of medical survey received and acted upon	1,906
Cases from Civil Service Commission received and answered	44
Cases of physical rejection, transfer of patients, and miscellaneous letters received and answered	2,309

REPORTS FROM NAVY-YARDS AND SHORE STATIONS.

The sanitary reports from navy-yards and shore stations, which in former years have been embodied in this part of the Surgeon-General's report, are now published in the section heretofore reserved for reports from the force afloat and for special reports. In this way the history of the medical, surgical, and sanitary work of the whole service will be issued in one section of the report, and it is hoped that it will be found more convenient for reference and comparison.

DENTISTS FOR THE NAVY.

The question of the employment of dentists by the Department for the personnel of the Navy is one that has been brought to the attention of the Bureau frequently of late. The importance of having skilled dentistry within the reach of those on duty in the outlying and isolated stations is evident, and at the large stations where recruits are assembled and apprentices are trained the value to the service of such professional attention is of no less moment. Many men who are now rejected for enlistment in the Navy might with safety be accepted were assurance offered for the immediate treatment and repair of

dental caries, as would be if dentists authorized to do such work for the enlisted force were employed at the large stations where recruits are now assembled.

A bill was introduced at the first session of the present Congress for the appointment of dentists for the Navy, but it failed of enactment. The Bureau, therefore, recommends that Congress be asked in the coming session to provide for the employment of contract dentists to be stationed at the large naval stations at home, and at all the stations beyond the continental limits of the United States, and that appointment of contract dentists be made by the Department, after careful examination and selection, and that contract dentists thus provided for shall be under the direction and control of the Bureau of Medicine and Surgery.

CONCLUSION.

In conclusion, the Bureau invites attention to the statistical report for the year. From this compilation it may be seen that the health of the Navy and Marine Corps has been good throughout this period, the percentage of sick and the death rate being lower than for several years.

The Bureau desires, also, to express, as a concluding remark, its commendation of the work of the Medical Corps during the year, and its appreciation of the difficulties under which the work has been performed. Since the end of the war with Spain the demands upon the medical officers have been steadily increasing until now the small number of the corps makes it no longer equal to the work required without a loss of efficiency. It is earnestly recommended that relief from this condition be asked of Congress at as early a date as possible.

Very respectfully,

P. M. RIXEY,
Surgeon-General, U. S. Navy.

The SECRETARY OF THE NAVY.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the Bureau of Medicine and Surgery, Navy Department.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
MEDICAL DEPARTMENT.			
For surgeons' necessities for vessels in commission, navy-yards, naval stations, Marine Corps, and for the civil establishment at the several naval hospitals, navy-yards, naval laboratory, Museum of Hygiene and Medical School, and Naval Academy, \$125,000 (act July 1, 1902) ...	\$125,000.00	\$125,000.00	\$125,000.00
NAVAL HOSPITAL FUND.			
For maintenance of the naval hospitals at the various navy-yards and stations, and for the care and maintenance of patients in other hospitals at home and abroad, \$40,000 (act July 1, 1902).....	40,000.00	40,000.00	40,000.00
CONTINGENT, MEDICINE AND SURGERY.			
For freight, expressage on medical stores, tolls, ferriages, transportation of sick enlisted persons to hospital, transportation of insane patients; care, transportation, burial of the dead; advertising, telegraphing, rent of telephones, purchase of books and stationery, binding of medical records, unbound books and pamphlets, postage and purchase of stamps for foreign service; expenses attending the medical board of examiners; hygienic and sanitary investigation and illustration; sanitary and hygienic instruction; purchase and repairs of wagons and harness; purchase of and feed for horses and cows, trees, plants, garden tools, and seeds, furniture and incidental articles for the Museum of Hygiene and Medical School, naval dispensary, Washington; naval laboratory, sick quarters at Naval Academy and marine barracks, surgeons' offices and dispensaries at navy-yards and naval stations; washing for medical department at Museum of Hygiene and Medical School, naval dispensary, Washington; naval laboratory, sick quarters at Naval Academy and marine barracks, dispensaries at navy-yards and naval stations and ships and rendezvous, and for minor repairs on buildings and grounds of the United States Naval Museum of Hygiene and Medical School; for the care, maintenance, and treatment of the insane of the Navy and Marine Corps on the Pacific coast, and all other necessary contingent expenses, \$35,000 (act July 1, 1902)	35,000.00	35,000.00	35,000.00
REPAIRS, MEDICINE AND SURGERY.			
For necessary repairs of naval laboratory, naval hospitals and appendages, including roads, wharves, outhouses, sidewalks, fences, gardens, farms, and cemeteries, \$40,000 (act July 1, 1902)	40,000.00	40,000.00	30,000.00
NOTE.—The increase in the appropriation for repairs, medicine and surgery, is necessary for the proper protection of Government property and for the preservation and improvement of the fourteen naval hospitals and appendages, including roads, wharves, outhouses, sidewalks, fences, gardens, farms, and cemeteries.			
NAVAL HOSPITAL, NEW YORK.			
For changing officers' quarters into wards for enlisted men, and building quarters for officers outside of naval hospital, \$20,000 (act July 1, 1902)	20,000.00	20,000.00	20,000.00
NAVAL HOSPITAL, WASHINGTON, D. C.			
For the erection and completion of new buildings for the accommodation of the United States Naval Hospital, Washington, D. C., on the grounds belonging to the United States Naval Museum of Hygiene and Medical School, \$125,000 (submitted)	125,000.00	125,000.00	
NAVAL LABORATORY, BROOKLYN, N. Y.			
For the erection and completion of a new building for the accommodation of the United States naval laboratory, Brooklyn, N. Y., on the grounds of the United States naval hospital, Brooklyn, N. Y., \$75,000 (submitted)	75,000.00	75,000.00	

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, by the Bureau of Medicine and Surgery, Navy Department—Continued.

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
NAVAL HOSPITAL, YOKOHAMA, JAPAN.			
For the erection of new buildings at the United States naval hospital at Yokohama, Japan, for the accommodation of the kitchen, men's mess room, smoking room, and "lower ward," to replace buildings unfit for further use, \$25,000 (submitted)	\$25,000.00	\$25,000.00	
NOTES. <i>Naval hospital, New York.</i>—The crowded condition of this hospital renders it desirable that the quarters now occupied by the medical staff of the hospital should be changed into wards for the accommodation of enlisted men. <i>Naval hospital, Washington.</i>—The present building is of antiquated block design, of insufficient capacity, and conforms in no respect to the conditions of modern hospital requirements. It was built in 1865 and is located in a thickly populated part of the city, without surrounding grounds or structural facilities for the isolation of contagious diseases. <i>Naval laboratory, Brooklyn.</i>—The naval laboratory is the medical storehouse where all medical supplies for the Navy, ashore and afloat, are assembled, and the only one on this coast from which they are distributed. The present building is neither sufficient in size nor adapted to the purpose for which it is used. A new building should be erected in a more accessible location. <i>Naval hospital, Yokohama.</i>—The buildings referred to are old and worn, damp, and poorly lighted. They are obsolete in design and fail to meet the requirements of modern hospital conditions, and because of their location and antiquated construction should be replaced.			

R E P O R T

OF THE

COMMANDANT OF UNITED STATES MARINE CORPS.

HEADQUARTERS U. S. MARINE CORPS,
Washington, D. C., September 25, 1902.

SIR: I have the honor to submit the following report of the condition and services of the United States Marine Corps for the past year:

Since the date of my last report I have made a personal inspection of the marine barracks at the navy-yards, Portsmouth, N. H., Boston, Mass., Brooklyn, N. Y., League Island, Pa., Pensacola, Fla., the naval station, Port Royal, S. C., and the manufacturing depot and assistant quartermaster's office, Philadelphia, Pa. Although I have not made a regular inspection of the marine barracks, United States Naval Academy, Annapolis, Md., I have visited the station two or three times during the year in connection with the construction of the new barracks.

Improvements and repairs have been or are being made at the several stations as mentioned below:

BROOKLYN, N. Y.

The extensive repairs and improvements to the officers' and enlisted men's quarters and guardroom at this post mentioned in my last annual report have been completed. The barracks is now a three-story building, capable of accommodating 500 men, and the installation of steam heat, thoroughly modern and sanitary bathrooms, lavatories and water-closets has made the building comfortable and healthful. Repairs have also been made during the year to roofs, iron fence, gallery range, etc.

Upon the recommendation of the surgeon attached to the station, the location of the sick quarters was changed from the second floor to the third floor of the barracks. This change was desirable in every way, as it affords complete isolation and quiet to the sick.

The old drainage system at the post has been completely renewed, at an expense of \$1,755, borne by the regular appropriation.

In the urgent deficiency appropriation act approved February 14, 1902, Congress provided \$1,500 for the installation of one auxiliary steam-heating boiler at the Brooklyn Barracks. This boiler has since been put in place and is ready for use, and should insure the maintenance of a comfortable temperature in the barracks during the coming winter.

In the current appropriations the sum of \$3,500 is available for the installation of an electric-lighting plant at this station, and preliminary steps have been taken to install the system at the earliest practicable date.

A new porch has been constructed in the rear of the commanding officer's quarters, and various minor repairs have been authorized and completed.

BOSTON, MASS.

At this post minor repairs have been made to the woodwork, guttering, plumbing, etc.

Congress has appropriated \$1,500 with which to modernize the plumbing system at the Boston Barracks, extensive repairs being required to put the water-closets in a thoroughly sanitary condition, and to improve the ventilation and light of the rooms in which the water-closets are located. The post has been visited by a representative of the Quartermaster's Department, preliminary to the commencement of the repairs. The necessary plans have been formulated, and the work will be begun in a few weeks.

PORTSMOUTH, N. H.

Minor repairs have been made to the buildings, plumbing, and heating apparatus at this station, and dormer windows have been put in the roof of the barracks to provide the necessary light and ventilation. Repairs have also been made to the rifle gallery and coal shed. To afford better protection against fire the barracks have been connected with the general fire-alarm system recently installed in the Portsmouth Navy-Yard, a fire-alarm box having been located under the arcade of the barracks, and an alarm gong placed in the most advantageous position to be heard.

In submitting the annual estimates of the corps this year, I inserted an item of \$1,200 for the construction of a substantial but inexpensive brick house, two stories in height, for the commanding officer's quarters at Portsmouth, with the intention of turning over the present commanding officer's quarters for use as junior officers' quarters, they being thoroughly unfitted for their present use. By direction of the Secretary this item was stricken from the estimates, as he is considering a plan of extensive improvements at Portsmouth, which will include quarters for marine officers. Additional quarters for officers at this station will be needed in the near future, as the present officers' quarters are not suitable for their purpose and do not afford sufficient accommodation.

Steps have been taken to install electric lights in the Portsmouth Barracks, which was provided for in the act of Congress approved July 1, 1902, and this work is now well under way. This system, when completed, will be a great improvement over the present method of illuminating by gas, and will be beneficial to the health and comfort of the command.

LEAGUE ISLAND, PA.

As the barracks at this station has only been completed and occupied since August 1, 1901, no repairs have been needed during the year except to repaint the woodwork in a few places where necessary.

tanks have also been made. The lower porch has been renewed and extended to the second story, which will add to the appearance of the building and increase the comfort of the men. A small lighter has been constructed for this post for the purpose of carrying stone, gravel, and miscellaneous supplies, which will result in economy to the government.

An additional sum of \$2,500 was authorized by Congress in the current year's appropriations for the erection of officers' quarters at Sitka, Alaska, and with this amount, together with the previously available appropriations for the purpose, it is believed that commodious and comfortable quarters for the officers can be erected. Preliminary steps in this direction have already been taken, and this work will be begun in the early spring, as it is not practicable to do any extensive building during the cold season in the latitude of Sitka.

At the request of the Bureau of Equipment, Navy Department, a coal dock has been built on Japonsky Island, under the supervision of the commanding officer of marines, and a small building has been erected on the island for use as quarters by the marines performing the guard duty there.

SAN JUAN, P. R.

At this station the usual repairs necessary to prevent deterioration have been made, but no extensive changes have been planned, in the absence of definite information as to the Department's intentions concerning the location and character of the permanent station at San Juan.

DRY TORTUGAS, FLORIDA.

No extensive repairs have been made at this post since my last report. The question of furnishing ice and preserving fresh provisions at the station has been a source of anxiety, owing to the isolation of the station and the semitropical climate. The installation of a small ice plant was contemplated, but it was found that the cost of such a plant would be very considerable, and there being no specific appropriation available for the purpose the plan was abandoned and arrangements were made to supply ice to the station from Key West at regular intervals, a large refrigerator having been furnished to the station by the Quartermaster's Department. Semiweekly service now exists between Key West and Dry Tortugas, and the commanding officer reports that the refrigerator will answer the requirements of the post until better arrangements can be made.

The quartermaster has been directed to ship to Dry Tortugas the necessary additional barracks equipment for an increase of 25 men in the strength of the command, and it is my intention to send these additional men to the station as soon as the cold weather begins, if the men are available. The men would have been sent sooner but for the fact that it is not considered safe to send men to such a tropical climate during the summer season. By sending them in the winter the danger of the climatic conditions having an injurious effect upon the health of the men is to a large extent avoided. The health of the command at Dry Tortugas has been good during the year.

MARINE BARRACKS, NAVAL STATION, AGANA, GUAM.

In a report to the Assistant Secretary of the Navy, dated November 20, 1901, a copy of which was furnished for the information of these headquarters, Commander Seaton Schroeder, U. S. Navy, governor of the island of Guam, stated that the health of the command at the naval station appeared to be better than at the same time last year. He also reported that the rainy season had had a very beneficial effect in stimulating the general vegetation of the island which had suffered almost total destruction in the hurricane of November, 1900. This report states that the census taken in August 1901, shows the population of the island to be in the neighborhood of 9,700.

Commander Schroeder in his report mentions that the public school system of the island has been placed under the general supervision of an American teacher, and says that it is his intention to detail a well-equipped noncommissioned officer of marines as an additional assistant instructor in Agana, and another at Asan. Gratifying progress is being made in teaching the English language to the inhabitants.

A report from Maj. H. K. White, U. S. M. C., commanding the marine battalion on the island of Guam, dated August 31, 1901, was not received at these headquarters until November 2, 1901, too late to permit of the information it contained being incorporated in my last annual report.

In this report Major White makes a résumé of the various improvements which have been completed since the establishment of the station. He says the ice plant which was completed in the latter part of 1900 has been furnishing ice steadily ever since, contributing immeasurably to the health and comfort of the officers and men at the station.

The government house and other buildings at the station have been kept in excellent repair by the work of the men of the command, repairs, painting, etc., being done by them whenever required. About seventy additional cocoa palms have been planted around the parade ground. An epidemic of grip occurred in November, 1900, which caused a discontinuance of all drills for the period of seven months. Major White says the typhoon of November 13, 1900, so devastated the island that it practically required the commencement of all work at the station anew, but the work has steadily progressed ever since until the buildings and grounds are practically in as good condition as they were before the hurricane.

Major White speaks in high terms of the men of his command, saying that in spite of the many great inconveniences to which they have been subjected they have been uncomplaining and subordinate. When the U. S. S. *Yosemite* was wrecked and her crew joined the command at Agana, the men cheerfully shared both food and lodging with all.

It has been the aim not to require men to remain at Guam longer than one year unless they express a desire to do so, which many of them do. As occasion has offered, small detachments of men have been relieved from Guam and sent to Cavite, and other men have been transferred from the latter station to the former to fill the vacancies. Soon after the hurricane opportunity offered to send a large number of men of the battalion to Cavite and to have their places taken by other men. This was regarded as particularly fortunate, as it obviated the necessity of imposing upon the men of the original battalion the discouraging task of doing over again their arduous work in the construc-

tion of the buildings and the other improvements at the station, and made it possible to delegate this work to the new set of men who had just arrived.

The work of improving the roads in the vicinity of the naval station has been performed under the supervision of the commanding officer of marines in his capacity as chief of public works, the governor of the island having directed a civilian civil engineer to report to the commanding officer as his assistant in superintending the road work over the more distant portions. As many natives as were available were used in this work, which, so far as it has proceeded, has been done in a thorough and substantial manner.

All the stores for the command at Agana and the detachment at Asan have to be transferred in carts and wagons from the landing at Piti, which work is exceedingly laborious and slow in view of the bad condition of the roads and the small loads which can be carried. This work, ever since the establishment of the station, has been done by the men of the command. An idea of its magnitude may be formed from the statement of Major White that the cartage for one quarter amounted to 3 wagons and 517 carts (193 tons) of coal, and 66 wagons and 964 cartloads of stores for the paymaster, commissary, yards and docks, quartermaster of the Marine Corps, ice, supplies, etc. For the past year the transportation amounted to about 450 wagonloads and 4,000 cartloads, including about 600 tons of coal to be handled and weighed, bag by bag. This does not include the vast amount of local transportation involved in the issue, shifting, and restowage of supplies, lumber and other building materials, etc. In all this and other related work Major White states that First Lieut. William Hopkins, U. S. M. C., the battalion quartermaster and post adjutant, has rendered zealous and efficient aid.

One of the improvements made under the direction of Major White was the remodeling of a building called "Filipino Hall," formerly a prison. This structure was cleared out, whitewashed, and provided with a roof and board floor, making a large, airy mess hall, a great improvement over the crowded and stuffy room theretofore used for the purpose, which was turned over to the paymaster of the station for use as a storeroom. A covered way from the kitchen to the mess hall was also constructed. In addition, two excellent storerooms of small size were built with material obtained from a wall which had been around the "Filipino Hall" above referred to.

Repairs to the signal station on a hill near the naval station, Agana, were made by marines, and when these repairs were completed and the necessary instruments installed a meteorological station was established there, three privates being detailed to take observations, and a lieutenant of the Marine Corps being placed in charge in the absence of an available line officer of the Navy.

On July 1, 1901, most of the departments of the station having been established on a fair working basis, the governor of the island turned over to the proper department—yards and docks—the repair of all buildings, sewers, and transportation, and relieved the commanding officer of marines of his duties as chief of public works of the island. In so doing the governor spoke complimentarily of the work of Major White, as follows:

At this time of your severance from duty connected with the island government I desire to thank you cordially for the zealous attention and good judgment which have marked your administration of the office of public works.

One of the important improvements adding to the contentedness of the men is the construction of a light and cool room, 20 by 51 feet, under the northwest corner of one of the barracks buildings, fitted up with shelves, tables, etc., for use as a library and reading room, and stocked with about 1,200 excellent books which have been generously donated and sent to Guam, and are all catalogued and ready for use. A good supply of lamps having been obtained the library offers an attractive, comfortable, and quiet resort for the men during the evenings or other unoccupied hours.

The amusement or recreation room, a feature of great importance in such an isolated station as Guam, has been greatly improved as to light and ventilation, and out of the profits accruing from billiards, etc., in addition to that part allotted for the improvement of the mess, a considerable sum has been spent in obtaining athletic apparatus, such as bars, rings, trapeze, rowing machine, punching bag, boxing gloves, foils and masks, baseballs, bats, etc. The material for a bowling alley has been purchased, and the alley will be built as soon as the necessary skilled labor for its construction can be obtained.

The bathing facilities for the men have been greatly improved by providing additional tubs and tanks, which are used with rainwater most of the year, thus avoiding the necessity for bathing in the swampy river water.

Major White, in concluding his report, speaks most gratefully of the kindness of the quartermasters of the army transports who, he states, have taken all possible pains and trouble to fill the wants of the battalion, to the limits of their stock. The supplies furnished by the transports have been the main reliance of the command at Guam, not only for the few luxuries obtainable, but often for actual necessities. The complete report of Major White is appended to my report, marked "A."

In accordance with a request from the governor of Guam, 25 marines were sent to the island in the army transport *Sheridan*, sailing from San Francisco April 1, 1902, thus restoring the strength of the battalion at Guam to 177 enlisted men. The governor, in recommending that these men be sent, stated that they were absolutely necessary, to allow time for drills, target practice, and other military duties, in addition to the numerous other duties required of the command.

MARINE GUARD AT NAVAL MAGAZINE, IONA ISLAND, NEW YORK.

At the request of the Chief of the Bureau of Ordnance, Navy Department, made in view of the magnitude and importance of the naval magazine at Iona Island, New York, a marine guard consisting of 1 first sergeant and 10 privates was sent to that station April 17, 1902, as directed by the Department.

A full supply of the necessary barrack equipment for this guard was sent to Iona Island by the quartermaster of the corps by order of the commandant, and the guard is comfortably quartered in one of the buildings at the magazine belonging to the Bureau of Ordnance, and rations are furnished, and laundry work, etc., done under contract in the usual manner.

THE PHILIPPINES.

At the time my last annual report was submitted to the Department Lieut. Col. M. C. Goodrell, U. S. M. C., was in command of the First

Brigade of Marines, naval station, Cavite, P. I., the command of the brigade having devolved upon him by reason of the return to this country of Col. H. C. Cochrane, U. S. M. C., the former commanding officer, as mentioned in my report of last year.

Col. James Forney, U. S. M. C., was detached from the marine barracks, navy-yard, League Island, Pa., December 17, 1901, and ordered to command the marine brigade at Cavite. He assumed command of the brigade January 27, 1902.

In accordance with the policy of the major-general commandant to have all officers and men on duty in the Philippines returned to this country as soon as they have completed two and one-half years' service there, 23 officers and 500 enlisted men have been sent to the Philippines since the beginning of the calendar year 1902, and 17 officers and 620 enlisted men have returned to this country from the islands. These transfers have resulted in bringing home all officers and men who have served over two and one-half years in the islands, and the sending of other officers and men to take their places, and it is hoped that in the future the term of service in the Philippines may be limited to two years, it being the consensus of opinion among those who are best informed in the matter that this is as long as it is advisable to keep officers and men in the Philippine climate.

The first of the detachments sent to the Philippines this year sailed from San Francisco January 16 in the army transport *Kilpatrick*, and consisted of 7 officers and 100 enlisted men.

The second detachment sailed from San Francisco March 15 in the army transport *Hancock*, and consisted of 5 marine officers, 1 naval surgeon, and 150 enlisted men.

The third detachment sailed from San Francisco April 1 in the army transport *Sheridan*, and consisted of 6 marine officers, 1 naval surgeon, and 150 enlisted men. The *Sheridan* stopped at Guam en route and Maj. P. St. C. Murphy, U. S. M. C., ordered to command the marines at Guam, and 25 enlisted men were left at that station.

The fourth and last detachment sailed from San Francisco April 16 in the army transport *Sherman*, and consisted of 5 marine officers, 1 naval surgeon, and 100 enlisted men.

Each of the detachments has been sent from the Atlantic coast to San Francisco in a special train of the Chesapeake and Ohio Railroad Company, and all the trains have been run through on time without an accident or mishap of any kind. Each of the special trains mentioned was provided with a Pullman car for the officers, and tourist cars for the men. A dining car was attached to each train and the men were provided with three good meals a day on the trips.

The detachments returning to this country from the Philippines during the year have been as follows:

Two officers and 70 enlisted men sailed from Manila April 15 in the gunboat *Manila* and arrived at Mare Island June 16.

Seven officers and 300 enlisted men sailed from Manila May 14 in the army transport *Warren* and arrived at San Francisco June 12.

Three officers and 153 enlisted men sailed from Manila May 21 in the army transport *Kilpatrick* and arrived at San Francisco June 19.

Twenty-eight enlisted men sailed from Manila July 6 in the army transport *Thomas* and arrived at San Francisco August 1.

The U. S. S. *Solace* arrived at Mare Island from Cavite on September 21 with 5 officers and 97 enlisted men.

Owing to the scarcity of men at the marine barracks, navy-yard,

Mare Island, Cal., the detachments arriving on the *Manila* and *Solace* have been retained at that post for the present, but it is my intention to bring them east as soon as I can enlist men on the Pacific coast to take their places at Mare Island.

All the other detachments as above mentioned were, immediately upon their arrival at San Francisco, sent east in special trains and distributed among the eastern stations of the corps.

I saw these various detachments as they passed through Washington. The health of the men was excellent and they were in good condition in every way.

It was my intention to start an additional large detachment of men to the Philippines before this time to relieve officers and men now there who have completed two years' service in the islands, but the troubles on the isthmus of Panama have necessitated the organization of two battalions of marines, one of which has been sent to the Isthmus, the other being now held in readiness for duty there if required, and this will make it impossible to send any more detachments to the Philippines until the officers and men comprising the battalions mentioned become available.

The marines now in the Philippines are distributed among the following-named posts: Cavite, Paranaque, Rosario, Novaleta, Balabac light, Las Pinas, Morong, Bacoar, Cavite Viejo, Pollok, Subig, Olongapo, Isabela, Malabrigo light, San Bernardino light.

A report received from Col. James Forney, U. S. M. C., commanding the First Brigade of Marines, dated July 18, 1902, shows that the general health of the officers and enlisted men in the islands is excellent, and that, generally speaking, the barracks and quarters are in as good condition as could be expected, considering the fact that most of them were not constructed for the purpose for which they are being used and are more or less ill adapted for such purpose. All of the buildings have been vastly improved since the American occupation of the islands. A copy of Colonel Forney's report is appended to my report, marked "B."

The fact that there has been practically no active field work in the island of Luzon during the year has permitted more attention to be given to the drilling of the men, and drills have been held regularly on five days of the week at the different stations, with beneficial results.

Colonel Forney reports that on March 26, 1902, he instituted a tournament for the three best rifle shots in the brigade. Prizes were offered and teams competed from San Felipe, Cavite, Bacoar, and Olongapo. The match took place at the navy-yard range at Canacao, the prizes being won by the team from Olongapo.

On March 25 the senior squadron commander, United States naval force, Asiatic Station, cabled the Navy Department that cholera had broken out at Manila and that quarantine regulations had been established. In pursuance of this officer's recommendations the President authorized an allotment of \$500 from the emergency fund of the Navy Department for the erection of a disinfecting house in the navy-yard at Cavite; and this step, together with other prompt sanitary precautions, undoubtedly prevented a more serious epidemic. One officer of the Marine Corps, First Lieut. O. H. Rask, died of this disease on May 29. Lieutenant Rask was a most capable and promising young officer, and his death is a great loss to the corps. Thanks to the strin-

gent measures which were promptly taken to prevent the spread of the disease, only four enlisted men of the Marine Corps have died of cholera during the year.

On January 7, 1902, I directed Col. F. L. Denny, quartermaster, United States Marine Corps, to proceed to the Philippine Islands to inspect the buildings and grounds, public property, etc., of the several stations of the Marine Corps in those islands.

The quartermaster's inspection of the various posts was greatly facilitated by the courtesy of Rear-Admiral Frederick Rodgers in allowing him to visit the different posts on the U. S. S. *Zafiro*, thus completing the inspection in the short period of fourteen days.

The quartermaster's report of this inspection dated July 1, 1902, which is appended to my report, marked "H," gives an interesting and detailed account of the condition and requirements of the different posts visited by him. On account of the uncertainty as to the permanency of a number of stations, no estimates have been submitted for certain improvements which will be absolutely necessary if the stations are to be maintained permanently. When more definite information can be obtained relative to the permanency of these stations specific recommendations will be made relative to repairs and improvements required.

While there have been practically no demonstrations during the year by organized insurgents, the marines have done good work toward ridding the islands of various roving bands of ladrones which still infest many localities there. The following paragraph describes a typical case of marauding by ladrones and prompt action on the part of marines:

On the evening of November 3, 1901, one of the native residents of Olongapo reported to Lieut. Col. O. C. Berryman, U. S. M. C., commanding the district of Subig and Olongapo, that he had been attacked by a party of five ladrones near Morong; that his wife had been abducted, and all the property of both stolen.

Lieutenant-Colonel Berryman detailed First Lieut. W. W. Low, U. S. M. C., who volunteered, to capture the party of ladrones, which was done by this officer, with a detail of a corporal and 10 men. The ladrones were found about $2\frac{1}{2}$ miles inland from Mabayo, Bataan Province. The 5 men captured were all armed with bolos, and one of them proved to be an escaped prisoner from Olongapo. The prisoners were sent to Morong for transfer to the civil authorities.

Lieutenant-Colonel Berryman remarks in his report that this capture will make the trail to Morong more secure in future.

First Lieutenant Low commends the men composing the detail under his command for willingness and soldierly performance of duty in making the capture, they having pulled a cutter 24 miles and marched over a difficult trail at night to accomplish the purpose.

BATTALION OF MARINES IN SAMAR.

On October 20, 1901, a battalion, consisting of Maj. L. W. T. Waller, U. S. M. C., commanding; Capts. D. D. Porter, R. H. Dunlap, A. J. Matthews, and H. I. Bearss; First Lieuts. J. T. Bootes, J. H. A. Day, C. C. Carpenter, A. S. Williams, and H. R. Lay; Second Lieuts. J. P. V. Gridley, Frank Halford, and A. C. Rogers; Surg. G. A. Lung, and Asst. Surg. J. M. Brister, and 300 enlisted men, was detailed at Cavite for duty on the island of Samar.

The battalion was composed of Companies C, D, and H, First Regiment, and Company F, Second Regiment, First Brigade of Marines, and, equipped in heavy marching order, embarked on the U. S. flagship *New York* at Cavite October 22, 1901.

This battalion was detailed by Rear-Admiral Frederick Rodgers, U. S. Navy, senior squadron commander, Asiatic Station, to reenforce and cooperate with the army troops under command of Brig. Gen. J. H. Smith, U. S. Army; and while it was the intention that the marine battalion should be under the general command of Brigadier-General Smith, it was also contemplated that Major Waller's movements should be supported, as far as possible, by a vessel of the fleet, to which he should make reports from time to time, and through which supplies required by him were to be furnished.

The battalion arrived at Catbalogan, Samar, on the morning of October 24, and both it and the stores were transferred to the U. S. S. *Zafiro*, which vessel, preceded by the U. S. S. *Frolic*, carrying Rear-Admiral Rodgers and staff and Brigadier-General Smith and his aids, proceeded to Tacloban, Leyte, and thence to Basey, where two companies and the battalion staff were disembarked, relieving the Ninth United States Infantry. The marines at this point were provided with one 3-inch gun and a Colt automatic 6-millimeter gun.

Major Waller then returned to the *Zafiro*, which, with the *Frolic* and *Vicksburg* went to Balangiga, on the south coast of Samar, where Capt. D. D. Porter was left in command with 159 men, relieving the Seventeenth United States Infantry, with instructions to begin operations as soon as possible. Major Waller then returned to Basey, and, after consultation with General Smith, published a general order relative to the lines on which the campaign was to be conducted, with the object of clearing Samar of the treacherous enemy, particular instructions being given to prevent rice and other food supplies getting into the interior for the use of the insurgents. Orders were also given for the destruction of all bancas and boats not registered.

The district to be covered by the marines embraced the entire southern portion of the island of Samar, and active operations were at once begun, both at Basey and Balangiga, small expeditions being sent out almost daily to clear the country of the insurgents, who were not generally found in formidable numbers, but appeared in small, roving bands, some of which, however, had provided themselves with more or less extensive defenses in the way of trenches, traps, pits, etc. Among the insurgents there appeared to be a great many bamboo guns, but very few rifles.

During the expeditions sent out from Basey and Balangiga, numerous villages were destroyed, a considerable number of natives captured, and a quantity of rice and other provisions seized. From time to time, as the operations were continued, the natives came into the various towns and took the oath of allegiance to the United States.

On November 5 Major Waller took a detachment to the Sohoton, and drove the insurgents from their trenches there. Two private marines were killed in this action; the number of natives killed could not be ascertained, as it took some time to reach the trenches.

A great many small expeditions were sent up the Cadacan River. Several of these parties were fired upon, but the skirmishes were slight, and no casualties were suffered by the marines. In an engagement on the 8th of November, at Iba, 9 natives were killed and 11,

armed with bolos, were captured; a number of houses were also destroyed, and a quantity of hemp seized.

An expedition taken out by Captain Porter to scout in the neighborhood of Balangiga, killed 1 insurgent and captured 7. This party found many relics of the massacred men of the Ninth Infantry.

Another expedition was sent to the Sohoton, November 13 and 14, in which 12 insurgents were killed. Major Waller says that these expeditions into the Sohoton district were the most important of the whole campaign, so far as their effect upon the insurgents was concerned.

About the middle of November, three columns were dispatched into the Sohoton region to attack the fortified cliffs and caves in the mountains, which had been reported to be practically impregnable. Two of the columns, under command of Captains Porter and Bearss, respectively, marched on shore, and the third, commanded by Major Waller, went up the river in boats. The plan of the attack was that the two shore columns were to unite on November 16 at the enemy's stronghold, and be joined there by the third, or river column, under Major Waller, with the object of making a combined attempt to force the enemy's position.

On the 17th of November, the shore column struck the enemy's trail, which was followed, and the detachments soon came upon a number of bamboo guns. One of these commanding the trail had the fuse burning, and Acting Corporal Harry Glenn rushed forward and pulled out the fuse. The attack of the marines was a perfect surprise, and the enemy was completely routed, 30 being killed. After driving the insurgents from their position the troops crossed the river, scaled the cliffs on the opposite side, and destroyed the camps there. The enemy fired two volleys and then fled. Major Waller says that he himself was not in this attack, being in the river below and unable to reach the firing line in time, but he mentions Captains Porter and Bearss as being entitled to the highest credit for the courageous and skillful manner in which they routed the enemy in the face of apparently insurmountable obstacles. In order to reach the enemy's position, the troops had to climb the cliffs, which rise sheer from the river to the height of about 200 feet and are honeycombed with caves, to which access is had by means of bamboo ladders, and also by narrow ledges with bamboo hand rails. Tons of rocks were suspended in cages, held in position by vines, and in readiness to be precipitated upon people and boats below. Instant destruction would have undoubtedly been the fate of the boats had they undertaken the ascent of the river before the shore column had dislodged the insurgents. In Major Waller's report of the above-mentioned engagement, he says:

The men in this march overcame incredible difficulties and dangers. The positions they destroyed must have taken several years to prepare. Reports from old prisoners said they have been three years working on the defenses. No white troops have ever penetrated to these positions, and they were held as a final rallying point. The cliffs were of soft stone of volcanic origin, in the nature of pumice. It cut the men's shoes to pieces. Many of the men were barefooted, and all had bad feet. The march was heroic, and too much praise can not be given the men. We in the boats were not ten minutes away in point of distance, but unable to reach the flanking column at the point of attack. The troops captured and destroyed 40 bamboo guns, rice, food, and cuartels.

Further pursuit of the enemy at this time had to be abandoned because the rations of the marines had become exhausted. Concerning

the officers and men who especially distinguished themselves in the above-described engagement, Major Waller says:

I wish to recommend especially Capts. D. D. Porter and H. I. Bearss for either a medal of honor or a brevet. These officers carried out their instructions in the face of hardships, dangers, and incredible obstacles. Not only was personal courage of a high order displayed, but intelligence, discrimination, and zeal. Each footstep in the advance up the cliffs carried its own dangers. These captains report to me, and I in turn cordially indorse their recommendations—First Lieuts. C. C. Carpenter and H. R. Lay, and Second Lieut. A. C. Rogers. Where all did so well it seems almost impossible to distinguish extraordinary service. Each man carried his life in his hands. Asst. Surg. J. J. Brister, U. S. Navy, is especially recommended by Captain Porter for his work and assistance. Gunnery Sergt. John H. Quick and Acting Corp. Harry Glenn, Company H, are especially recommended, the first for conspicuous conduct, Glenn for risking his life to pull out the fuse of a bamboo gun. Sergeant Quick now holds a medal of honor for Guantanamo. I do not believe there is anything too good for him. Private Campbell is mentioned for his conspicuous work with the Colt gun, under extreme difficulties.

Of Captain Bearss' detachment, the following men are especially recommended: Sergeant McCaffery, and Corporal J. J. Murphy, for scaling cliffs to the right, an extremely courageous and hazardous undertaking. Corp. Robert Lakaye, for swimming the river unarmed in the presence of the enemy, to secure bancas. First Sergeant Grogan, Company F, for great zeal in constantly encouraging men under the most adverse and trying circumstances.

Although the river column was unable to reach the point of attack, its presence made it possible for the shore column to do so and to surprise the enemy.

The effect of the capture of this last stronghold upon the insurrectos of Samar can not be overestimated, as they had spent years of labor upon the defenses, and undoubtedly considered the cliff fortifications impregnable.

Brigadier-General Smith, commanding the Sixth Separate Brigade, complimented the work done by Major Waller's battalion as follows:

The brilliant success of your command, both men and officers, has my highest congratulations. * * * There is nothing impossible for the American fighting man, and your work in the Sohoton Province is an additional proof of that fact.

Rear-Admiral Rodgers also complimented Major Waller's forces for their work, telegraphing as follows from the flagship *New York*:

Well done, marines. The senior squadron commander sends hearty congratulations to you, Captains Porter and Bearss, and your command. They are doing what I predicted for them, and are maintaining the reputation of the corps.

Major-General Chaffee, United States Army, telegraphed Major Waller from Manila, under date of December 1, 1901:

Have just read your message to General Smith, dated 19th. Thanks to officers and men. Assure each of my cordial regard and my highest appreciation of the manly heart and soldierly spirit which makes light of obstacles and is never daunted or satisfied while service can be rendered to our country. I hope kind Providence will guide the footsteps and take the part of American soldiers battling for peace in the wilderness of Samar.

The following cablegram was also repeated to Major Waller at Basey, Samar:

Rodgers, Cavite. Department congratulates Waller and command.

The important bearing and value of the work done by Major Waller's battalion in destroying the natives' stronghold in the Sohoton Mountains is indicated by the terms of appreciation used by those in authority who were thoroughly conversant with the conditions and difficulties under which success was achieved.

General Smith, in forwarding Major Waller's report of November

23, 1901, relative to the above-described operations, indorsed it as follows:

Maj. L. W. T. Waller, U. S. M. C., now brevet lieutenant-colonel, has proven himself to be an officer of exceptional merit, and carries out my instructions loyally and gallantly. He deserves another brevet for his services thus far, and I urge this recognition; also a general order from the division commander, congratulating him and the marine corps of this command.

General Smith also concurred in Major Waller's recommendations of Captains Porter and Bearss, First Lieutenants Carpenter and Lay, Second Lieutenant Rodgers, and Assistant Surgeon Brister, U. S. Navy, as well as those relating to Corporal Lakaye, Acting Corporal Glenn, First Sergeant Grogan, and Private Campbell.

Maj. Gen. Adna R. Chaffee, commanding the Division of the Philippines, in forwarding the same report, says:

The work of the marines stationed in southern Samar has been gratifying, and they have accomplished much good in the short time they have been there. I recommend such action be taken on this report as may be deemed appropriate and proper under the circumstances.

The Secretary of War, in forwarding the reports to the Secretary of the Navy, used the following language:

In transmitting these papers I avail myself of the opportunity to express the gratification of this Department for the excellent work of the marines stationed in southern Samar and to join with General Smith in his recommendation for suitable recognition of the services of Major Waller and his command.

After the detachments returned from the expedition into the Sohoton country, the plan of sending out small detachments to rid the country of insurgents wherever they were reported to be was successfully continued. During these expeditions a considerable number of insurgents were killed and quantities of supplies seized. The effect of this continual pressure upon the insurgents was shown by the number of people who presented themselves in the various towns to take the oath of allegiance to the United States.

In a communication dated December 5, 1901, Major Waller refers to General Smith's desire that the marines make the march from Basey across the island to Hernani, on the east coast, for the purpose of selecting a route for a wire to connect the east and west coasts. General Smith also asked Major Waller to run wires from Basey to Balangiga, and left to the major's discretion the point of departure from the east coast, either from Hernani or Lanang.

December 8 two columns were started from Basey for Balangiga, one under command of Major Waller, proceeding along the shore line, and the other under Captain Bearss, marching about 2 miles inland, stores being sent by the cutter which was kept abreast of the beach column. The details of this march are given in full in Major Waller's reports, all of which are appended to this report, marked "S."

Minor operations were conducted from Balangiga during December, and these are described in detail in the reports which are appended hereto. Expeditions were also sent out as far as Quinapundan, Omagongong, and Pambuham, and scoured the intervening country thoroughly, having numerous small skirmishes with the natives. At Omagongong the column was fired upon by the enemy from a nearby hill, and Sergeant-Major Bell was wounded in the shoulder. This fire was silenced and the trenches and earthworks of the insurgents were destroyed.

THE MARCH ACROSS SAMAR.

Major Waller's report of January 25, 1902, which will be found in the appendix to this report marked "S," contains the account of his march across the southern part of Samar, from Lanang to Basey, during which almost incredible hardships were endured by the officers and men, who lost their way in the mountains owing to the trails being obliterated by floods and freshets and were many days without food.

On arriving at Lanang, prior to starting on this march, Major Waller says he found that Lieutenant Williams, of the Seventh Infantry, had just come in from a twelve-day trip looking for the Sohoton trail and did not believe the trail existed. He and Captain Pickering, commanding the post, urged Major Waller not to make the attempt, but the major says in his report:

Remembering the general's (General Smith's) several talks on the subject and his evident desire to know the trail and run wires across, coupled with my own desire for some further knowledge of the people and the nature of this heretofore impenetrable country, I decided to make the trial with 50 men and the necessary carriers.

The detachment started from Lanang on the morning of December 28, 1901, the personnel being as follows: Maj. L. W. T. Waller, Capt. D. D. Porter, Capt. H. I. Bearss, First Lieut. A. S. Williams, U. S. M. C.; Second Lieut. A. C. De W. Lyles, Twelfth Infantry, U. S. Army, aid sent by General Smith; Second Lieut. F. Halford, 50 enlisted men of the United States Marine Corps, 2 native scouts, and 33 native carriers.

The start was made in boats, but when Lagitao was reached it was found impossible to use them further on account of the numerous rapids, and they were accordingly sent back with the men of the Seventh Infantry, who had accompanied the detachment thus far, and the remainder of the distance was made on foot. One of the most trying features of the march was the necessity for crossing and recrossing the river many times, keeping the men's clothing wet continually, so that they became badly chafed. On the 30th of December it was necessary to issue reduced rations, and the next day the rations had to be cut down to one-half and the number of meals per day to two. The march was continued across the mountains over an almost impassable country on January 1 and 2. On the 3d it was reported to Major Waller that many of the men could not keep up, and after a conference with his officers he decided to take one officer (Lieutenant Halford, who was in charge of the advance that day) and 13 of the men who were in good shape and push forward as fast as possible to the destination, with the idea of sending a relief party back with provisions, clothing, etc., for the main column, which was to go slowly and follow Major Waller's trail, which would be clearly marked. Captain Porter was left in command of the main column. The advance column was afterwards joined by Captain Bearss and a corporal, the former carrying a message from Captain Porter. A message was sent back to Captain Porter, directing him to follow the advance column to a clearing which had been found where there was a quantity of sweet potatoes, bananas, and young cocoanut palms, and to rest there until his men were in condition to proceed. This message did not reach Captain Porter, however, as the native by whom it was sent returned two days later, stating that there were so many insurrectos about that he was afraid; but Captain Bearss said he was sure Captain Porter would follow, as he was considering it when he left.

On January 4 Major Waller's party discovered a clearing, rushed the first shack they came to, and captured 5 people, among whom were a man and a boy who stated that they knew the way to Basey. The other captives were released and these two placed under guard to act as guides. After crossing the Sohoton River, the celebrated Spanish trail leading from the Sohoton caves to the Suribao River was discovered and followed. After the Loog River was reached and crossed, the party proceeded through the valley to Banglay on the Cadacan River, and near this point Major Waller's party came upon the camp which Captain Dunlap had been directed to establish to await their arrival. The detachment was placed in Captain Dunlap's cutter, and the start made for Basey at once, where they arrived on the afternoon of January 6.

Concerning the condition of the men of his party, Major Waller says:

The men, realizing that all was over and that they were safe and once more near home, gave up. Some quietly wept; others laughed hysterically. * * * Most of them had no shoes. Cut, torn, bruised, and dilapidated they had marched without murmur for twenty-nine days, and, having accomplished what no white troops had done before, they thought not of it but of each other. They spoke of me, my age, and to them well-known injury to my feet, and they wondered how I stood it.

Immediately after the arrival of the detachment at Basey a relief party was sent back to the point where the last clearing and the guides had been found, and Major Waller himself followed the next day, and joined the first relief party, remaining out nine days searching for signs of Captain Porter without success. No trace of him or his party could be found where they they had last been seen. The floods were terrific and had been worse, several of the former camp sites being many feet under water. The men of the relief party began to break down, as they had been through many hardships and were a day without food, and the party had to return. Upon returning to Basey Major Waller was taken sick with fever.

The entire march across Samar was about 190 miles. Major Waller's march, including his return with the party searching for Captain Porter, was about 250 miles.

In Captain Porter's report, written from Camp Connell, Balangiga, Samar, under date of February 8, 1902, which is appended to my report marked "S," he states that he had failed to receive definite information as to what Major Waller's intentions were, and as the condition of his men was rapidly becoming serious, and the food supply was practically exhausted, he discussed the situation with Lieutenant Williams and finally concluded that the best thing to be done was to get to Lanang by their old trail. Captain Porter, considering himself to be stronger and in better physical condition than Lieutenant Williams, took Sergeant Quick, 6 privates and 6 natives and started for Lanang on the morning of January 3, ordering Lieutenant Williams to remain where he was waiting a reasonable length of time for Major Waller's party and then to follow Captain Porter's trail. Captain Porter says that the sufferings and hardships endured by his men, caused by sore feet, the lack of food, and constant downpour of rain, were indescribable. The men's bodies were covered with sores caused by constant chafing by the wet clothing. The Lanang River rose 15 feet in one night, making it impossible to cross from side to side, as had been done previously. Upon reaching a point where the boats had been left before, four of seven men in the party had to be left behind, as their condition would not warrant their attempting to go farther.

At this place there was a small potato patch, so that the men could subsist until aid reached them. Captain Porter expected to reach Lanang in four days, but the high waters and the weakened condition of the men prevented him from doing so until the evening of January 11, 1902.

Upon his arrival at Lanang, Captain Porter explained the situation to Captain Pickering, Company K, First Regiment U. S. Infantry, who immediately organized a relief expedition under Lieutenant Williams, Company K, which made every effort to start the following morning but the men were nearly washed out to sea, and were consequently forced to wait until the river went down, which was not until early on the morning of January 14. Owing to the swift current, it took Lieutenant Williams and his party three days to go the same distance that the marine detachment had covered in one day on the way up. Lieutenant Williams of the Infantry is entitled to great credit for his 25-mile fight against the current and up the rapids hauling his boat a part of the way by hand. On January 16 the relief party met the four men who had been left by Captain Porter and sent them to Lanang by canoe. The main body of the men under Lieut. A. S. Williams, U. S. M. C., were reached by the relief party on the morning of the 18th of January, and were safely landed at Lanang on the evening of that date. Both Lieutenant Williams, U. S. M. C., and the men were in a wretched condition, and broke down completely upon their arrival. During the march which Lieutenant Williams had made 10 men had been left, from time to time, as they were absolutely unable to move farther from exhaustion, starvation, and exposure. Lieutenant Williams said there was positively no hope for these men.

The complete report of Lieutenant Williams is appended to my report marked "S," and in this report the slow and painful progress made by his men and the privations suffered by them are described. All of the party were in such a mental and physical condition that it is surprising that more of them were not lost. The condition of the detachment became so bad that a sergeant and nine of the men in the best condition were sent ahead to impress upon the rescuing party the desperate straits of the remaining men. This advance party reached the point where the final rescue was effected five days ahead of the remaining members, but the men were unable to proceed farther on account of the swollen condition of the river. Toward the latter part of the march the native carriers became most surly, refusing to obey orders when called upon and going outside of calling distance when the party went into camp at night. One of the native carriers attacked Lieutenant Williams with a bolo and succeeded in stabbing him a number of times, although, fortunately, the wounds were slight. This officer was also bitten on the hand by a native. While this attack took place other native carriers stood by and offered no assistance. Some of the men, notably Sergeant McCaffery, came to the assistance of Lieutenant Williams, although the sergeant was too weak to work the bolt of his rifle.

In his report Lieutenant Williams says:

The discipline of the men is deserving of the highest praise. At a time when all were despairing and desperate, and rank meant little, none failed to render me prompt obedience and the unfaltering respect that marks the good soldier. Some despaired from the beginning, and were only kept in line by their more sanguine comrades. In this connection I must mention Privates Kittle, Slattery, and Davis, whose constant hopefulness and expressed determination were as great a help to me as to the others. Captain Porter's action in going ahead of me to Lanang in the

comparatively short time of twelve days deserves the very highest praise, and to his courage and determination is due our rescue. Appreciation of the action of Second Lieut. K. P. Williams (U. S. Army) will surely result in his receiving the medal of honor for which he has been recommended, and which he so richly deserves.

Having learned that a detachment of one company of infantry sent to garrison Quinapundan had failed to reach that place, Major Waller offered to garrison it with men from Basey and Balangiga, and one company of 46 men and a surgeon under Captain Bearss from the former station, together with 25 men under Second Lieutenant Halford from the latter, proceeded to Quinapundan accordingly. Some resistance from the natives was encountered at two points on the way to Quinapundan, but their fire was soon silenced, and the camp was established at that place on January 19. After the camp was pitched the detachment was again fired upon by the natives with about 12 rifles, but Lieut. C. C. Carpenter, with 15 men, flanked the insurgents and put them to flight. On January 31 a party of 25 men, under command of Second Lieut. A. C. Rogers, made a balloon-shaped "hike" to the northeast, and near the junction of the Quinapundan, Salcedo, and Omagongong trails encountered a party of insurgents and killed five bolo men. The next day Lieutenant Rogers' party was fired upon by the enemy with about 25 rifles, but the insurgents were forced to retire with heavy loss. Sergeant McSwiney was killed early in this fight, and a native guide was wounded.

These minor operations were continued from time to time from Quinapundan and Balangiga.

Captain Dunlap, who was left in command at Basey during Major Waller's march across Samar and the operations preliminary thereto, submitted a report dated January 17, 1902, which is appended to my report, marked "S," and which contains an account of the operations of the troops under his command from December 8 to 27, 1901. Several small expeditions were sent out, capturing a number of insurgents, destroying shacks, and seizing provisions belonging to the insurgents. The result of these continued and persistent movements against the insurgents was shown by the fact that on December 15, 1901, 26 bolomen with bolos presented themselves at Basey, and on the 17th five bolomen, including a captain of the insurgents, presented themselves at the post, and they were all given the oath of allegiance to the United States.

Referring to the men of Captain Porter's column, Major Waller says in his report, that the native carriers were sent from Balangiga to Basey with such men of the column as were able to move, the natives being under the guard of Sergeant Quick, and it was on this journey that the natives attempted to murder the marines, for which Major Waller ordered the natives to be shot. It was for the issuing of this order that Major Waller was subsequently tried by general court-martial and, as has been reported to the Department, was acquitted.

In the reports made by Major Waller that officer states that while Capt. R. H. Dunlap did not have an opportunity to meet the enemy in numbers, he was a brave and intelligent officer in whom entire confidence could be reposed. He also says that Surg. G. A. Lung, U. S. Navy, rendered much assistance in scouting and plotting, and that his map of the Cadacan River is the best extant. Private James Magee, Company H, is highly commended for saving the life of Corporal Murphy, of Company D, at the risk of his own. Major Waller says that First Lieut. A. S. Williams, U. S. M. C., should be rewarded for

his indomitable pluck on the march back to Lanang, and that Capt. A. J. Matthews and Lieutenant Halford at Balangiga were especially active and merit reward.

In a supplementary report made after his return to this country, Major Waller refers to certain other expeditions not mentioned in his main reports, among which were an expedition on November 23, 1901, to the vicinity of Nipa Nipa under command of Major Waller and Captain Porter, which was designed to intercept boats communicating with the insurgents in Samar from Leyte. Two boats were fired upon and overhauled and 3 of the insurgents were killed. Another expedition was taken by Lieutenant Gridley in the same direction on December 15. The boats of this expedition were swamped in a typhoon and driven ashore. Bolomen swarmed on the beach to kill the marines when they landed, but the latter, as soon as they gained a footing unslung their rifles, opened fire, and succeeded in driving the insurgents off. Lieutenant Gridley is complimented for his management of this expedition.

On January 4, 1902, an expedition was sent to Odoc under charge of Lieut. C. C. Carpenter, as insurgents were reported to be in force in that locality. Eight insurgents were killed and 4 captured by Lieutenant Carpenter's party. On the 25th of the same month a party sent out under Lieutenant Gridley toward Iba had a skirmish with the insurgents and killed 8. In closing his supplementary report Major Waller mentions the names of the officers composing the personnel of his command, inviting attention to the different recommendations as follows:

First Lieut. A. S. Williams, twice recommended.
 First Lieut. J. T. Bootes, quartermaster and commissary.
 Surg. G. A. Lung, U. S. Navy, once recommended.
 P. A. Surg. J. A. Brister, U. S. Navy, once recommended.
 Capt. D. D. Porter, U. S. M. C., twice recommended.
 Capt. R. H. Dunlap, U. S. M. C., once mentioned.
 Capt. A. J. Matthews, U. S. M. C., once mentioned.
 Capt. H. I. Bearss, U. S. M. C., twice recommended.
 First Lieut. J. H. A. Day, U. S. M. C.
 First Lieut. C. C. Carpenter, U. S. M. C., twice recommended.
 First Lieut. H. R. Lay, U. S. M. C., twice recommended.
 Second Lieut. A. C. Rogers, U. S. M. C., twice recommended.
 Second Lieut. J. P. V. Gridley, U. S. M. C., twice recommended.
 Second Lieut. Frank Halford, U. S. M. C., twice recommended.

Major Waller also asks that the attention of the Department be invited to the different mentions of naval officers, who so heartily and readily at all times cooperated with and assisted his command, and adds:

To Surgeon-Major Coombs and Lieutenant Yost, U. S. A. M. D., are due the thanks of our entire corps for their care of our sick officers and men. Of Capt. D. D. Porter I can not say too much. The same may be said of Capt. H. I. Bearss. Captain Matthews always showed great courage and judgment. Captain Dunlap, always ready, steady, and reliable, only lacked opportunity. Of the lieutenants coming immediately under my notice, Lieutenants Williams, Carpenter, Halford, and Gridley stand foremost. I was, however, dependent largely upon the reports of the captains concerning their subalterns.

The Samar battalion returned to Cavite March 2, 1902, after having been relieved in southern Samar by detachments from the Army. In the cablegram conveying this information to the Navy Department, dated March 16, 1902, the commander in chief, Asiatic station, said:

I desire to state here that the marine battalion commanded by Major Waller, which was sent to the southern end of Samar, then considered the worst place in the Phil-

ippines, and where nearly a whole company of the Ninth Infantry had just been massacred, was actively and continuously engaged against the insurrectos for over three months and performed its duty in a most efficient manner.

CAMP ROOSEVELT, CULEBRA, P. R.

In accordance with the recommendation of the general board, and the determination of the Department to establish a naval base on the island of Culebra, Virgin Islands, West Indies, this office was directed to detail a detachment of 5 officers and 100 enlisted men for duty at Culebra. This detachment was placed under command of Maj. H. C. Haines, U. S. M. C., whose previous duties as a member of the general staff of the War College had especially fitted him to direct the work in contemplation, and the other officers detailed were Capt. G. C. Thorpe, First Lieuts. L. M. Harding and H. C. Snyder, and Second Lieut. Harold Colvocoresses, U. S. M. C.

At the request of this office, a medical officer of the Navy was detailed for duty with the detachment at Culebra, P. A. Surg. H. H. Haas, U. S. Navy, being selected for the duty, and members of the Hospital Corps, United States Navy, and a complete medical outfit, were also furnished.

In view of the prospective landing operations of the North Atlantic fleet at Culebra, the commandant of the Marine Corps, at the request of the commander in chief, directed that the camp equipage and other materials used the previous summer in the landings at Nantucket and similar work be returned to the fleet.

On November 25, 1901, the Chief of the Bureau of Supplies and Accounts directed the commandant, navy-yard, Norfolk, Va., to set aside provisions for 100 men for six months, and to hold them in readiness to be placed on board the collier *Leonidas* for the use of the special detachment of marines to be sent to Culebra. At the request of this office these provisions were invoiced not as regular navy rations, but as stores to be purchased for cash as needed by the officers and men of the detachment.

On November 29, 1901, Maj. H. C. Haines took command of a detachment consisting of First Lieut. L. M. Harding, Second Lieut. Harold Colvocoresses, 11 noncommissioned officers, 1 drummer, 1 trumpeter, and 60 privates, at the marine barracks, navy-yard, Brooklyn, N. Y., and proceeded the same day to Fort Monroe, Va., arriving there on the morning of the 30th idem and reporting to the commanding officer of the U. S. S. *Alabama*. A detachment of 27 privates had, in the meantime, reported on board the *Alabama*, bringing the total enlisted strength of the detachment up to 100. These men were fully fitted out for field service. For passage to Culebra, the detachment was divided between the *Alabama* and the *Massachusetts*, Major Haines, Lieutenant Harding, and 60 enlisted men remaining on the former vessel, and Second Lieutenant Colvocoresses and 40 enlisted men taking passage on the latter. En route to Culebra, the men of the detachment were messed by the general mess of the respective ships, and slept on canvas cots supplied by the Marine Corps. These men were as comfortable as could be expected on the trip, everything possible being done by the commanding officers of the two ships to make them so.

The vessels left Hampton Roads, Va., December 1, 1901, and after stopping on the way at Charleston, S. C., Matanzas and Habana, Cuba,

and San Juan, P. R., arrived at Culebra January 1, 1902. The U. S. collier *Leonidas*, having on board Capt. G. C. Thorpe and First Lieut. H. C. Snyder, U. S. M. C., for duty with the detachment, as well as rations, boats, lumber, and quartermaster stores, left Norfolk January 13, 1902, and arrived at Culebra January 21, 1902. P. A. Surg. H. H. Haas, U. S. Navy, also joined the detachment at Culebra a little later.

The equipment of the detachment sent to Culebra was most complete in every particular, and included a large quantity of lumber and tools, rapid-fire guns, spare parts, and accessories; a sailing launch, with all its equipment and spare parts, a whale boat, similarly complete, a dingey, and an ample supply of tackle, blocks, bolts, nails, wire, rope, etc.

The detachment was also furnished with the necessary scientific instruments and apparatus for taking observations, including compasses, field glasses, heliographs, barometers, sextants, transit instruments, drawing instruments, as well as field telephones, electric batteries, extra wire, etc.

Major Haines landed at Culebra January 1, 1902, to select a camp site for the detachment and chose a point of land on the north side of Great Harbor, immediately inside the entrance. This tract, containing about 20 acres, was cleared of trees and, being on the crest of a ridge running out into the harbor, afforded excellent drainage and was convenient for the work in contemplation and for landing stores; it was also exposed to the prevailing winds. The land being private property, the permission of the owner to establish the camp upon it was obtained.

On the 6th of January a working party was landed and the camp was established and named "Camp Roosevelt," in honor of the President. The remaining men of the detachment were landed on the 10th and 13th, respectively.

On January 8 Second Lieutenant Colvocoresses was condemned by a board of medical survey and sent to the hospital at San Juan, P. R., for treatment, and subsequently to the United States.

At my request the Department, on January 22, directed the commander in chief of the North Atlantic Station to order the fleet paymaster to transfer \$2,500 to First Lieutenant Harding, the quartermaster of the detachment at Culebra, for the purchase of fresh provisions for the men, and orders were also given to the commandant of the naval station at San Juan, P. R., directing him to order the station tug to carry provisions to Culebra on Monday and Friday of each week.

The work of clearing camp sites for officers and men, finishing the wharf which had been commenced some time previously, building an additional wharf, and clearing the ground as a site for the storehouse was continued until January 21. The site for the enlisted men's tents was on the ridge at the extreme end of the point abovementioned, about 30 feet above the water. The officers' tents were placed on a hill, about 40 feet higher and about 100 yards to the northeast of the men's camp. On January 21, as above stated, the collier *Leonidas* arrived with 2 officers and quartermaster's stores and rations for the detachment. Up to this time the detachment had been rationed by the *Alabama* and *Massachusetts*. Upon the arrival of the *Leonidas* rations were obtained from the stores brought by her. All rations were commuted at the rate of 25 cents per diem per man, and stores

were drawn from those sent down by the Bureau of Supplies and Accounts, and charged at invoice prices. Fresh beef, of very fair quality, was procured on the island at 10 cents per pound. Sweet potatoes, milk, and bananas were also obtained on the island in sufficient quantities, but, with these exceptions, practically nothing in the way of food can be obtained there. There appeared to be no potable water available on the island, and drinking water for the detachment was supplied from a water boat which was towed from the naval station at San Juan, P. R., filled with distilled water from the fleet, and anchored off the camp. This boat had a capacity of about 30,000 gallons. Attempts were made to keep the boat supplied with distilled water brought over from San Juan on the U. S. tug *Uncas*, and later on the *Potomac*, but most of it was rejected on account of the salt water which had worked into the tanks on the passage over. Major Haines reports that iron tanks or storage cisterns are badly needed for the reason that if anything should happen to the water boat the command would be left entirely without water.

The construction of a storehouse, a rough frame building 30 by 50 feet, was begun as soon as the material was landed, the work being done under the immediate supervision of Lieutenant Harding, the quartermaster of the detachment, who is highly complimented by Major Haines for his energy and good judgment. The work was finished on February 7, and the stores were immediately moved into the building.

Work on the field hospital was begun on February 10, and completed on the 14th. The hospital is a small, rough frame building 15 by 30 feet and entirely too small to properly serve its purpose. The recommendation of the Bureau of Medicine and Surgery was that there should be an operating room, dispensary, sleeping quarters for two hospital attendants, and a ward containing six beds. This being impracticable, the operating room and dispensary were combined, and the two hospital attendants sleep in a tent close to the hospital.

The North Atlantic fleet left Culebra on the 2d of February, and the commander in chief turned over to Major Haines an order from the Secretary of the Navy to take command of the post and island, the latter part of the order being modified by a later order from the same authority to take charge of the public lands on the island. In complying with this order, Major Haines translated a notice into Spanish and posted it in the usual place for public notices in the village of Ildefonso, and a copy of the notice was also given to the insular or civil delegate governor of the island.

Before the departure of the fleet, certain ordnance and ordnance stores were landed for the use of the detachment.

The transportation and emplacement of guns was placed under the immediate supervision of Captain Thorpe, who is commended by Major Haines for the efficient manner in which he performed this duty.

A working party under charge of Lieutenant Snyder ran telephone lines from a central station of a tent back of the officers' quarters to the first sergeant's tent, guardhouse, the delegate governor's office in the village, and to the signal station on the island, a distance of about 2 miles from the camp. The work on the last was extremely arduous, it being necessary to cut a road through dense underbrush, up the side of the mountain, and to clear away about an acre of trees and brush at the summit to get a clear view in all directions. The telephones used were of the army field type, which worked very satisfactorily.

In connection with the contemplated erection of enlisted men's quarters on the island, Major Haines strongly recommends that an amusement or club room for the men be constructed near the quarters, as this would tend greatly to the better discipline and comfort of the men at such an isolated station.

Capt. G. C. Thorpe was condemned by a board of medical survey April 19, 1902, and on the 20th of the same month was transferred to the naval hospital at San Juan, P. R., for treatment.

On April 22 the Secretary of the Navy cabled the commander in chief of the North Atlantic Station directing that the marine detachment at Culebra be withdrawn and brought home, with the exception of 1 officer and 10 enlisted men and the apothecary, to hold the station and care for the property. It was also directed that six months' supplies of stores be left on the island. This withdrawal of the detachment was necessitated by the lack of proper quarters required for the health and protection of the officers and men during the rainy season.

In accordance with these directions, Major Haines and his command, with the exceptions just mentioned, embarked April 23 on the vessels of the fleet.

Major Haines and 45 enlisted men came north on the *Indiana*, Major Haines returning to duty as a member of the staff of the Naval War College, and the men being transferred to the marine barracks, navy-yard, Brooklyn, N. Y., for duty. First Lieut. H. C. Snyder and 23 enlisted men came north on the *Kearsarge*, this officer and the men being transferred to the marine barracks, navy-yard, Norfolk, Va., together with 22 other men who came north from Culebra on the *Alabama*.

After the departure of the fleet on February 2, communication was kept up with San Juan by weekly trips of the tugs *Uncas* and *Potomac*, which brought mail and fresh vegetables ordered in San Juan.

Major Haines recommends that a small tug or picket boat be attached to the post, not only for the purpose of communicating with San Juan in the event of emergencies, but as an almost necessary adjunct to the work carried on at Culebra, for the transportation of men and materials to the various points where work is or will be in progress. A steam launch would be too light for anything but harbor work, and Major Haines says that such a boat, to be useful, should not draw more than 6 or 7 feet of water.

Major Haines reports that the health of his command was excellent during the stay on the island, the sick list, outside of cases of dengue fever, averaging less than 1 per cent, the dengue fever bringing the percentage up to about 8 per cent. Mosquitoes were not troublesome, except occasionally when the wind dropped, but it is understood that they are very annoying during the rainy season. The command is furnished with mosquito nets.

Major Haines commends most heartily Captain Thorpe and Lieutenants Harding and Snyder for the zeal displayed by them and the excellent work accomplished through their efforts. He also says that Passed Assistant Surgeon Haas, the medical officer attached to the command, displayed at all times the greatest interest in the care and comfort of the sick, and was unremitting in his efforts to keep the hospital and the grounds surrounding it in a clean and attractive condition. There was no occasion to perform any surgical work of more than minor importance upon members of the command, but excellent

surgical work was performed among the natives; so much so that patients came from the neighboring island of Vieques, and even from Porto Rico to place themselves in his hands for treatment.

The few men left at Culebra were placed under the command of First Lieut. L. M. Harding, and, by direction of the Department, explicit instructions were given this officer concerning the duties of the guard under his command, to the effect that it was left in charge of the naval reservation and was responsible for the care of the Government stores, etc., that had been left there. By a later order, the naval surgeon was also left on the island to look out for the health of the detachment. The stores, tents, ordnance, etc., were left in charge of Lieutenant Harding.

The Department directed that this small detachment be relieved by a similar guard on the 1st of July, but before that time arrived Lieutenant Harding and his men requested permission to be allowed to remain there until the fall; and as they had become acclimated and were thoroughly familiar with the work to be done, their request was granted by the Department upon the recommendation of this office.

The Department directed that as soon as funds become available proper steps be taken to construct suitable quarters on the island of Culebra for 4 officers and 100 enlisted men. Estimates were accordingly submitted by me, and Congress inserted an item of \$5,000 for this purpose in the naval appropriation act approved July 1, 1902. The lumber was purchased as soon as possible after the passage of the act and shipped to Culebra. The construction of the barracks and quarters has been delayed, however, owing to the fact that the most desirable site is in the town of Ildefonso, and the question of the Government ownership of this land is now before the Attorney-General for his opinion. As soon as this opinion is rendered the quarters will be immediately constructed.

At the request of the Department, First Lieut. L. M. Harding was directed to make a survey of the Government land on the island of Culebra and the water front, indicating the most desirable location for wharves, coal sheds, etc. This work has been completed, and the drawings giving the desired information have been transmitted to the Department.

The small detachment under command of Lieutenant Harding has been continuing the work on the magazine and gun emplacements, so far as possible, and to facilitate this work, Second Lieut. C. T. Westcott and 40 additional enlisted men were transferred from the marine barracks, navy-yard, Brooklyn, N. Y., to Culebra on August 16, with the permission of the Department.

SCHOOL OF APPLICATION.

Before the opening of the School of Application at the marine barracks, Washington, D. C., I convened a board of officers consisting of Lieut. Col. B. R. Russell, U. S. M. C., Maj. C. H. Lauchheimer, assistant adjutant and inspector, U. S. M. C., and Maj. C. A. Doyen, U. S. M. C., for the purpose of considering the scope of the studies to be pursued by the officers attending the school, and submitting recommendations in regard to the course about to be commenced. This board was furnished with reports and other information relative to past courses at the school, and, after mature consideration, and having

particularly in view the brief period of time allotted for the school year (seven months), recommended a course calculated to give the student officers the greatest possible amount of useful instruction in the limited time available. The text-books used in this course are:

United States Navy Drill Regulations.
Firing Regulations for Small Arms, United States Army.
Wagner's Security and Information.
Beach's Field Engineering.
Winthrop's Military Law.
Lauchheimer's Forms of Procedure.
Root's Military Topography.
Ingersoll's and Radford's Naval Gunnery, and the Gunnery Drill Book for New Armaments, United States Navy.
Wagner's Organization and Tactics.
Batchelor's Infantry Fire.

In addition to these text-books the officers attending the school are required to study such portions of the Army and Navy Regulations, Accountability Instructions of the Marine Corps, and such pamphlets in use at the school as will give them a knowledge of the obligations and duties of an officer in the garrison, afield, or afloat. The student officers receive a thorough course in the United States Naval Code of Signals, comprising: (1) Army and Navy (wig-wag); (2) Electric Night (Ardois) System; (3) Instructions for Signalling (flag-hoists) United States Navy.

The course at the school is so arranged as to permit the instructor to fully explain the subject-matter of each recitation, and then follow such theoretical instruction immediately with practical work, applying the principles just learned. This plan can not be carried out in every instance, but it has been found to produce the best results, and is consequently adopted wherever practicable.

On October 1, 1901, Maj. C. A. Doyen, U. S. M. C., was ordered to report at the school of application for duty as assistant instructor, and on October 14, 1901, Second Lieut. R. C. Dewey, U. S. M. C., was ordered to report for similar duty.

The school opened October 15, 1901, with the following-named officers in attendance:

Capt. A. T. Marix.
Capt. W. H. Parker.
First Lieut. N. G. Burton.
First Lieut. R. P. Williams.
First Lieut. L. B. Purcell.
First Lieut. T. A. Mott.
First Lieut. J. C. Beaumont.
Second Lieut. P. M. Rixey, jr.

The school was conducted during the winter under the direction of Lieut. Col. B. R. Russell, U. S. M. C., commanding marine barracks, Washington, D. C., in accordance with the plan of instructions above outlined, and on December 20, 1901, Lieutenant-Colonel Russell reported that the officers of the class were ready for examination for promotion.

A class of noncommissioned officers and privates was under instruction at the school of application during the winter of 1901-2, and upon the completion of the course of instruction, certificates of proficiency in the branches studied were awarded the following-named men:

1. Gunnery-Sergt. James Boyle.
2. Gunnery-Sergt. John M. Adams.
3. Sergt. Frederick W. Wilson.

Mayor J. Adger Smith, in a letter to the Commandant of the Marine Corps, dated April 12, said:

I desire to thank you for your prompt acquiescence in our wishes, and to express to you my high appreciation of the very efficient manner in which Captain Leonard and his entire command discharged the delicate and responsible duties placed upon them during the three days' visit of President Roosevelt to Charleston and its vicinity.

As the President himself expressed to Captain Leonard his entire satisfaction and commended him for his zeal and diligence, I can say no more than that I heartily indorse every word the President uttered.

Hon. J. H. Averill, the director general of the exposition, also furnished a copy of resolutions adopted by the board of directors of the exposition, as follows:

The board of directors of the South Carolina Interstate and West Indian Exposition Company wish to give formal expression to their high appreciation of the services rendered by Capt. Henry Leonard, of the United States Marine Corps, and his command, on the occasion of the President's visit to the exposition.

They performed the difficult part assigned to them with unwearying patience and patriotic devotion.

The city council of Charleston also passed complimentary resolutions in regard to the services of the marines on the occasion of the President's visit.

Captain Leonard received the following communication from Mr. George B. Cortelyou, Secretary to the President, dated April 14, 1902:

I write to thank you in behalf of the President, Mrs. Roosevelt, and the members of their party for the courteous and efficient care shown by yourself and the men of your command on the occasion of the President's recent visit to the Charleston Exposition and to the Pine Forest Inn. The service rendered was, I assure you, most cordially appreciated.

On March 21, 1902, Second Lieut. A. J. O'Leary, U. S. M. C., was relieved from duty at the camp and his place was taken by Second Lieut. H. D. South, U. S. M. C., who joined the camp on March 19, 1902. Capt. Henry Leonard, U. S. M. C., was relieved from duty in command of the camp on April 13, 1902, by Capt. S. D. Butler, U. S. M. C.

Under date of June 10, 1902, Captain Butler sent to headquarters the following letter, dated June 2, from Mr. J. C. Hemphill, manager of the department of promotion and publicity at the exposition:

I am instructed by the board of directors of the South Carolina Interstate and West Indian Exposition Company to thank you, and, through you, your officers and men, for the faithful, efficient, and patriotic manner in which you have performed all your duties in Charleston during the exposition period.

The Exposition Company is doubly indebted to you for your cooperation with them on numerous important public occasions, and the people of this city, and the thousands of visitors who have been here, will not forget the very great pleasure you have afforded them by the exhibition drills and parades which you have given. It has been a great pleasure to have you with us, and one of the sincerest regrets that the exposition is over is that we shall not be able to keep you with us longer. Please express to your officers and men our thanks and congratulations, and believe me, etc.

The naval exhibit at the exposition was packed for shipment north by men detailed by the Department, who worked under the supervision of Captain Butler, U. S. M. C. The work of packing and loading on the cars the naval and Marine Corps exhibits was completed on June 14, 1902.

As there still remained considerable work to be done in the way of guarding the buildings, etc., and, furthermore, as the Marine Corps appropriation for transportation had become greatly depleted, the guard was kept at Charleston until the end of the fiscal year, when camp was broken, and the detachment left for Washington on July 1, 1902.

TARGET PRACTICE.

Attention is invited to the report of the inspector of target practice under date of April 21, 1902, a copy of which is hereto appended, marked "D," from which it will be seen that range firing has been conducted in conformity with the instructions issued by these headquarters at all posts at which it was practicable so to do. The obstacle which confronted us in previous years was to a great extent encountered during the past year, to wit, the difficulty of obtaining or constructing ranges at or near some of the most important stations of the corps, thus depriving the men who had qualified in the gallery from going on the range and competing for places as sharpshooters and marksmen. Thus the men who had qualified in the galleries at the important posts at Washington, D. C., League Island, Pa., and Boston, Mass., were not able to fire for record, as no ranges were available.

During the past year, by direction of the Navy Department, acting upon a request of the Light-House Board, the range which had previously been constructed upon the buoy station at Annapolis, Md., was shifted around at an angle of about 20° in order to clear a certain amount of farm land which was being cultivated at that station. This work was done by Lieutenant Feland, who successfully carried out the recommendations made by the inspector of target practice and approved by me. The inspector of target practice reports that a modern 600-yard range with two targets has been completed and fully equipped at this station. It is my purpose during the coming year to have this range extended to 1,000 yards.

The range which was rented near Ocean View, Va., for the use of the command at Norfolk was found to be a difficult one upon which to fire owing to the reflection of the sun upon the sand, and it is therefore intended during the coming year to shift said range a short distance from its present location so as to permit the men to fire over grass.

By Executive order dated June 13, 1902, the President has set aside the southeast quarter of section 34, township 23 north, range 1 east, Willamette meridian, at Bremerton, Wash., for use as a rifle range for the marines. It is my intention during the coming year to have constructed upon said site a suitable range for the command at Bremerton.

It is my purpose to endeavor to obtain during the coming year in the immediate vicinity of Washington, D. C., and Boston, Mass., suitable land upon which to construct rifle ranges for the use of the command at those stations.

A proposition is before me, upon the recommendation of the inspector of target practice, to build a safety range upon the Marine Corps reservation at League Island, Pa. This matter will receive attention during the coming year, and if it is impracticable to construct a safety range upon said reservation, the necessary steps will be taken to endeavor to secure a suitable tract of land in the vicinity of League Island for this purpose.

The report of the inspector of target practice shows that during the past year 1,236 men fired complete scores for record, and of these 65 qualified as sharpshooters, 74 as marksmen, 223 first class, 348 second class, and 323 third class. When consideration is taken of the high

standard necessary to qualify as sharpshooter or marksman, it is believed that this showing is very good. The number of men, as before stated, who fired complete scores for record is but a small percentage of those who had qualified in the gallery; the remainder were prevented from firing owing to the scarcity of ranges near the posts at which they had qualified, and also owing to the fact that many of the men were transferred to the Far East before they were able to go on the range.

The inspector of target practice under date of March 10, 1902, recommended that an effort be made to secure a suitable range in the vicinity of Cavite, P. I., for the use of the marines stationed there. This recommendation was by me referred to the commanding officer of the brigade, who appointed a board which has reported upon a suitable site near the naval hospital. The surgeon in charge of said hospital having objected to said site the matter has been referred to the Bureau of Medicine and Surgery for recommendation, and it is hoped that said Bureau will concur with the inspector of target practice that the use of this site as a rifle range will not in any way interfere with the sick at said hospital. If the site can be secured, the necessary arrangements will be made to construct thereon a range suitable for the command at Cavite.

Revolver practice has been more extensively conducted during the past year than during the previous years. The report of the inspector of target practice shows that such practice was held at 16 of the posts, and that 2,105 men qualified, and of these 706 qualified as first class. When it is remembered that last year but 386 so qualified, a marked improvement is easily noted.

THE MARINE CORPS TEAM IN THE INTERSTATE TOURNAMENT AT SEA GIRT, N. J.

Attention is invited to the report of the inspector of target practice under date of September 10, 1902, a copy of which is appended hereto, marked "E," showing the operations of the team which was assembled to represent the corps in the interstate shooting tournament which was held at Sea Girt, N. J., in September last. This report, which is full and complete, it is respectfully urged should be carefully examined, as it shows conclusively the most excellent work done by the team in these contests. The men were selected from the posts on the Atlantic coast, and were first assembled at Ordway, Md., on June 20, 1902, to compete for places upon the team, and on August 20, 1902, 2 officers and 14 enlisted men were sent to Sea Girt for preliminary practice on the range there.

The rules of the National Rifle Association and of the New Jersey Rifle Association, which were modified during the past year, permitted the representatives of the Marine Corps to enter other matches than the Hilton trophy to which alone our team was eligible last year; consequently the team, either as a team or as individuals, were entered in the Wimbledon cup match, the Hilton trophy match, the company team match, the regimental team match, the interstate military match, the President's match, and the skirmish team match.

An examination of the report above referred to will show that the character of the firing both as a team and as individuals was of a very high order. The team stood sixth in the competition for the Hilton

trophy, having made a score of 1,073, being beaten by Massachusetts and Pennsylvania for fourth place by only three points. The team last year in the same competition made a score of 1,014. This year, therefore, an advance of 59 points was made, and, in the opinion of the undersigned, this is extremely creditable. But for the fact that two of the members of the team on the day of the firing fell far below the scores they had previously made at practice, the team would have stood an excellent chance of taking third place and certainly would have attained the fourth place.

One of the gratifying facts in the report of the inspector of target practice is that the Marine Corps team took second place and gained a prize of \$25 in the skirmish team match, which was competed for by nine teams of the National Guards and the United States Army. Inasmuch as the conditions of this match approximate closely to the very conditions under which our men are trained and the purposes for which they are trained, and that prior to firing for this match the team had had but few skirmish runs, it is believed that this is conclusive proof of their efficiency as marksmen in the duties for which they are trained.

Besides this prize for the regimental skirmish match, Lieutenant Holcomb, one of the team, secured a prize of \$5, he having attained seventh place in the President's match, which was for the military championship of the United States and which was competed for by the most expert marksmen who were assembled at Sea Girt.

Attention is invited to the most excellent scores made in the interstate match, and especially at the 500-yard stage thereof. This firing was of an unusually good character.

In considering the work done by the Marine Corps team in this competition allowance must be made for the fact that the team representing the Marine Corps is composed of men who were selected just prior to the meeting, many of whom had never before fired in a competition and that they were brought in competition with teams the personnel of which has changed but little during the past ten years. When due weight is given this fact it must be conceded that the showing made by the Marine Corps team was of excellent character.

Lieutenant Holcomb, who was a member of the team, was invited by General Spencer to compete for a place on the international team which was to be sent to Ottawa, Canada, to compete with teams from Great Britain and Canada for the Palma trophy. Although Lieutenant Holcomb had had but little experience in long-distance firing, the invitation was accepted and after competition he secured a place on the team and, with my permission, was allowed to accompany the team to Ottawa. The supplementary report of the inspector of target practice dated September 15, 1902, attached hereto marked "F," shows that Lieutenant Holcomb made the highest individual score of all those competing, and thus secured the gold medal given to the competitor making the highest score.

The following quotation from the report of the inspector of target practice is self-explanatory:

I deem it a special pleasure to invite your attention to the fact that in this competition (for the Palma trophy) Lieutenant Holcomb, of the Marine Corps, who was a member of the American team, as above stated, made the highest individual total, and therefore won the gold medal which is given to the participant making the highest individual score. In view of the fact that the members of each of the three teams were selected from the best long-distance marksmen of the respective countries, this

medal won by Lieutenant Holcomb really entitles him to be considered the champion long-distance shot of the world, an honor which in the opinion of the undersigned reflects great credit upon the Corps.

This work, done by Lieutenant Holcomb, which was of exceptionally good character, is worthy of and receives the commendation of these headquarters.

The report of the inspector of target practice shows that the ammunition supplied by the Frankford Arsenal was of a very good character. He invites attention, however, to the fact that the teams which used the smooth bullet secured better results than were secured by those which used the lubricated cannellured bullet. This matter will receive the attention of the inspector of target practice during the coming year, and the question of the character of the ammunition to be used by the team this coming year will be decided by me after receiving his report on the subject.

It is very gratifying to be able to quote the following paragraph from the report of the inspector of target practice in relation to the exemplary conduct and military bearing of the team at Sea Girt:

I feel that I should not be performing my full duty if I did not invite your attention to the exemplary conduct and military bearing of the enlisted men who composed the team. I found it unnecessary at any time to even warn any member of the team, and not a single offense was committed, and when consideration is taken of the great temptations which surrounded the men at this place, this conduct becomes the more gratifying. I know you will be personally gratified to learn that the high record made by the men, so far as their conduct and bearing are concerned, was not only apparent to the undersigned but was frequently brought to his attention by the military people who were gathered at the range.

It is also a pleasure to bring to your attention the fact that both the governor of New Jersey, Hon. Franklin J. Murphy, and Brig. Gen. Bird W. Spencer, inspector of target practice of the State of New Jersey, were unremitting in their attention and courtesy toward the team which represented the Marine Corps, and I take great pleasure in quoting the comments of the inspector of target practice of the Marine Corps with regard to the treatment accorded the team by Gen. Bird W. Spencer:

I deem it my duty as well as a great pleasure to place upon record my acknowledgment of the courtesies extended to the team and myself by Brig. Gen. Bird W. Spencer and the authorities at Sea Girt. Nothing was left undone which would add to our comfort, every facility was afforded us for practice, and the competitions were carried on with a fairness and impartiality which convinced every member of the team that only the best team would win.

GYMNASIUMS AND AMUSEMENT ROOMS FOR ENLISTED MEN.

Experience having shown the great desirability of having at military posts gymnasiums, amusement rooms, and libraries for the benefit of the enlisted men, I have requested, in the annual estimates this year, that \$25,000 be appropriated by Congress to permit of their establishment at two or three posts of the Corps, the intention being to ask annually for a sum sufficient to continue the work from year to year until all posts of the Corps, at home and abroad, shall be so equipped. In my opinion, the value of these institutions can not be overestimated, having a tendency, as they do, to make the men more contented and comfortable, and more inclined to spend their leisure hours in legitimate amusements and diversions within the limits of the post, instead of going to saloons and questionable resorts outside. It is believed

that, by providing these places for rest and recreation within the limits of the post, where the men may indulge in various amusements and athletic exercises, or have quiet places in which to read when they so desire, the number of desertions will be materially lessened. In addition to the advantages just mentioned, the gymnasium will aid in the development and maintenance of an excellent physique among the men, thus giving them greater strength and endurance to perform the duties of a soldier.

THE INTERNATIONAL GUN.

In a letter to the Commandant of the Marine Corps, dated April 11, 1902, Capt. John T. Myers, U. S. M. C., called attention to the published statements to the effect that the so-called "international gun" used by the marines and sailors in the defense of the legations during the siege of Peking in 1900 had been presented to the Military Academy at West Point, N. Y., by the officer commanding the United States Army legation guard at Peking, and suggested the propriety of having this valuable historical relic restored to that branch of the service by whom it was operated during the defense of the legations, and upon the matter being brought to the attention of the War Department by the Secretary of the Navy, the Secretary of War directed that the gun be turned over to the Navy Department and sent to the Naval Academy at Annapolis, Md., for preservation.

VISIT OF PRINCE HENRY, OF PRUSSIA.

In connection with the visit of Prince Henry, of Prussia, to this country, a battalion of marines consisting of four companies and the band was assembled at the Pennsylvania Railroad station on the morning of February 24, 1902, to meet the Prince and his party upon their arrival in Washington. Another battalion of marines was detailed to be present at the White House for the reception of Prince Henry.

FUNERAL OF REAR-ADMIRAL W. T. SAMPSON.

By direction of the Department a battalion of marines and the band were ordered to act as a part of the funeral escort of the late Rear-Admiral William T. Sampson, U. S. Navy, on May 9, 1902.

FUNERAL OF GENERAL ROSECRANS.

A battalion of marines and the Marine Band participated in the funeral ceremonies connected with the burial of the remains of the late Maj. Gen. W. S. Rosecrans in the national cemetery at Arlington, Va., on May 17, 1902.

UNVEILING OF MONUMENT COMMEMORATING SPANISH-WAR DEAD.

At the request of the War Department, and by direction of the Secretary of the Navy, three companies of marines and the Marine Band were detailed to participate in the dedication ceremonies at the Arlington National Cemetery on May 21, 1902, attending the unveiling of a memorial statue to the soldiers and sailors who fell in the Spanish-American war.

UNVEILING OF STATUE OF ROCHAMBEAU.

By direction of the Department a battalion of marines and the Marine Band were detailed to participate in the military ceremonies attending the unveiling of the statue to Marshal Rochambeau in Washington on the 24th of May, 1902.

FUNERAL OF BRITISH AMBASSADOR.

A battalion of marines and the band participated in the funeral ceremonies of the late Lord Pauncefote, British ambassador on May 28, 1902. A noncommissioned officer and 9 privates of the corps were also detailed as body bearers to accompany the remains of Lord Pauncefote to Annapolis, Md., on June 1, preliminary to the shipment of the remains to England.

FIRE AT NEW YORK NAVY-YARD.

On the night of February 8 and the early morning of the 9th a fire occurred at the New York Navy-Yard, at which the marines of the station rendered prompt and valuable assistance. In a letter addressed to the commanding officer of marines by the commandant of the station the latter "commends, with pleasure, the efficiency and untiring efforts of the commanding officer and the officers and men under his command in protecting Government property from fire," etc. This report having been referred to the Secretary of the Navy for his information, the Secretary stated:

The Department is gratified to learn of the efficient and untiring efforts of the marines in connection with their duties in protecting Government property from fire on the morning of the 9th instant.

BATTALION FOR WINTER MANEUVERS.

Under date of July 16, 1902, the Department directed the organization of five companies of marines (one artillery and four infantry), each consisting of 1 gunnery sergeant, 5 sergeants, 6 corporals, 1 drummer, 1 trumpeter, and 90 privates, to be kept intact for service with the North Atlantic Fleet during the maneuvers this winter. In obedience to the Department's directions, two infantry companies were organized at Annapolis, Md., one at Brooklyn, N. Y., and one at League Island, Pa., and one artillery company was organized at Washington, D. C., instructions being given that the companies should be maintained at their full strength at all times and that they should be fully fitted out for field service. Directions were also issued that these companies be instructed, so far as the facilities at the respective posts would permit, in field fortifications, hasty entrenchments, including the construction of gun emplacements, the transportation of guns, the construction of gun platforms and gun mounts, the construction and operation of field telegraph and field telephone lines, etc.

When an order was received directing the immediate organization of a battalion of marines for service on the Isthmus of Panama, to which reference is made elsewhere in this report, such battalion was at once detailed from the above-mentioned companies. If the situation on the Isthmus of Panama continues to require the presence of marines there another battalion will be organized for duty with the

North Atlantic Fleet in the coming maneuvers, but if the companies originally organized for the purpose return to this country in time they will be ordered to participate in the maneuvers.

MARINE CAMP, ANNAPOLIS, MD.

In the latter part of June of this year the marines at the Naval Academy, Annapolis, Md., were transferred from the U. S. S. *Santee* and placed in camp. This camp has been maintained throughout the summer, and the command will remain in camp until they are transferred to the new marine barracks at the station. The opportunity offered at this station for the men to become accustomed to camp life and familiar with the other practical matters in which they have been instructed is of great value. The camp is under command of Maj. C. A. Doyen, U. S. M. C., who has given careful attention to the instruction of the officers and men.

MARINES LANDED AT PANAMA.

The marine guards of the *Marietta*, *Iowa*, *Concord*, and *Ranger* were landed at Panama, United States of Colombia, in the latter part of November, 1901, to protect American interests during the troubles on the isthmus at that time. The marines went into camp on shore, made frequent trips over the railroad as train guards, and performed other duties of like character required of them. They remained on shore only about ten days, the situation fortunately requiring no other duties on their part than those above indicated. In a report of the landing, Capt. A. S. McLemore, U. S. M. C., commanding the marine guard of the *Iowa*, calls attention to the excellent conduct of the men and their strict attention to duty, and states that there was not a single unauthorized absence or breach of discipline of any kind on the part of any of the men of the command, although the men had not had liberty or shore leave for five months.

PANAMA BATTALIONS.

First battalion.—In obedience to directions received from the Department, under date of September 11, 1902, issued on account of the possible injury to Americans and American interests and property on the Isthmus of Panama as a result of the revolution against the Government of the United States of Colombia, orders were issued by me on September 11, 1902, for the immediate organization of a battalion of marines, consisting of four companies, with a total strength of 16 officers and 325 enlisted men, for duty on the Isthmus of Panama, to be in readiness to sail within four days. Within twenty-four hours after the receipt of the order, supplies of all kinds, including rations, arms, ammunition, uniforms, tents, camp equipage, implements, etc., were ready for delivery on board the *Panther* at the navy-yard, League Island, Pa., where the battalion was to be assembled, the *Panther* having been delegated by the Navy Department to transport the battalion to Colon. The battalion, fully organized, armed, and equipped, was assembled and embarked on the *Panther* within seventy-two hours after the receipt of the orders. The men composing this battalion were taken from the marine barracks at Brooklyn, League Island,

Washington, and Annapolis. The quartermaster's department of the corps is entitled to much credit for the exceedingly expeditious manner in which the supplies and stores for this battalion were furnished and assembled. In this connection, the quartermaster, in his report, calls special attention to the zeal and ability of Maj. T. C. Prince, assistant quartermaster, U. S. M. C., in charge of the depot of supplies in Philadelphia, and Capt. W. B. Lemly, assistant quartermaster, headquarters United States Marine Corps.

Lieut. Col. B. R. Russell, U. S. M. C., was ordered to command this battalion, the other officers of the battalion being as follows: Maj. Geo. Barnett, Capt. W. B. Lemly, assistant quartermaster; P. A. Surg. C. D. Brownell, First Lieut. J. W. Broatch, adjutant; Company A, Capt. Dion Williams, First Lieut. A. S. Williams, Second Lieut. E. T. Fryer; Company B, Capt. M. J. Shaw, First Lieut. A. E. Harding, Second Lieut. D. W. Blake; Company C, Capt. D. D. Porter, First Lieut. B. F. Rittenhouse, Second Lieut. F. F. Robards; Company D, Capt. A. T. Marix, First Lieut. L. B. Purcell, Second Lieut. P. M. Rixey.

One of the companies of this battalion was an artillery company, armed with 2 Colt's automatic guns. The battalion sailed in the *Panther*, from League Island, Pennsylvania, on September 14, 1902, arrived at Colon September 22, and is now serving on the Isthmus, three of the companies being located at Panama, under command of Lieutenant-Colonel Russell, and one company being at Colon, under command of Major Barnett.

Second battalion.—In obedience to orders from the Department, dated September 20, 1902, a second battalion was organized for transfer to the U. S. S. *Prairie* for possible service on the Isthmus of Panama, this battalion consisting of six companies, or a total of 22 officers and 623 enlisted men. The officers of the battalion are as follows: Col. P. C. Pope, commanding; Majs. T. N. Wood and C. A. Doyen; Capts. T. P. Kane, T. S. Borden, N. H. Hall, S. D. Butler, R. H. Dunlap, F. L. Bradman, and C. S. Hill; First Lieuts. T. F. Lyons, E. E. West, W. H. Clifford, L. M. Little, F. E. Evans, N. G. Burton, T. A. Mott, W. McCreary; Second Lieuts. T. Holcomb, A. N. Brunzell, J. K. Tracy, F. A. Ramsey, F. S. Wiltse, F. A. Udell, R. C. Dewey. The men composing this battalion were taken from the marine barracks at Portsmouth, Boston, Newport, Brooklyn, League Island, Washington, D. C., Norfolk, Port Royal, Pensacola, and Annapolis, and from the receiving ships *Wabash*, *Columbia*, and *Minneapolis*.

The battalion was fully armed and equipped, mobilized, and ordered to be ready to sail from the navy-yard, Norfolk, Va., on the *Prairie*, within four days, for service on the Isthmus should such duty be required. The battalion is provided with 2 3-inch guns and 4 Colt's automatic guns.

RECRUITING.

During the first half of the past year recruiting progressed so favorably that for several months the corps was maintained at its full authorized enlisted strength, a result which had not been previously attained for two or three years. The passage of the act of July 1, 1902, increasing the authorized strength of the Marine Corps by 750 men, at once created that number of vacancies in the ranks, and since shortly before the

passage of the act mentioned recruiting has not been so rapid as it was during the earlier part of the year. The result is that at the time this report is written the corps is considerably below its authorized enlisted strength, and vigorous measures are being taken to stimulate recruiting, additional substations being opened in the regular recruiting districts, an office reestablished in Chicago, Ill, and another opened in Indianapolis, Ind. The establishment of other new offices in the near future is contemplated, and it is believed that with these increased facilities for recruiting it will soon be possible to obtain the number of men necessary to bring the corps up to its full authorized strength. As the recruiting for the Marine Corps is by the navy regulations placed under my direct supervision, it is my intention, as soon as my office duties will permit, to visit the various recruiting offices, with a view to determining what, if any, changes are advisable. Even with the full authorized enlisted strength it will be extremely difficult to meet the exceedingly numerous and important demands now made on the corps, and for this reason the active steps now being taken to secure desirable recruits will not be relaxed in any way until the desired number have been enlisted. The standard of requirements for men desiring to enlist in the corps has not been lowered in any degree. The harvest season in New England is over and I contemplate opening offices in the principal New England cities in a short time, from which good results are expected. It is also expected that a large number of recruits will be obtained in the region of the Great Lakes as soon as navigation closes there. During the year the main recruiting offices located in the large Eastern cities and in San Francisco have been maintained continuously, and 44 branch offices or recruiting substations have been established and maintained for varying periods of time, as warranted by the results obtained at each and the money available. In this connection it is to be said that even when the corps has been recruited to its full authorized strength the duty will be as hard upon the officers and men as it was before the increase was authorized by Congress, owing to the greatly increased demands upon the corps.

PRACTICAL EXERCISES BY MARINES OF NORTH ATLANTIC FLEET.

The marines from the several vessels of the North Atlantic Fleet were landed at various times between July 15 and September 8, 1902, and given exercises on shore of the highest practical value by Capt. Louis J. Magill, U. S. M. C., marine officer of the fleet. These practical exercises included practice marches in the neighborhood of Brooklyn, N. Y., by marines from the *Kearsarge*, *Alabama*, and *Massachusetts* organized as a battalion. Extended-order and street-riot drills were also held, as well as wall-scaling drills at the Brooklyn Navy-Yard. The proficiency attained in the latter drill is shown by the fact that at the conclusion of the practice the entire battalion could be put over the high navy-yard wall and reformed on the other side in less than three minutes. These marches and drills were repeated from time to time as opportunity offered. The officers and men evinced keen interest in the work and its beneficial effect upon both is marked.

During the summer's maneuvers the marine battalion from the North Atlantic Fleet was sent ashore and placed in camp on four different occasions, once at Menemsha Bight, Marthas Vineyard Island, and three times at Block Island. The first two camps lasted one night each,

affording opportunity only for instruction in establishing and breaking camp and the transportation of stores and equipage. On August 25 guards from the *Kearsarge*, *Alabama*, *Massachusetts*, *Brooklyn*, and *Olympia* were landed at Menemsha Bight and remained in camp until the 31st of August. The officers and men comprising the battalion formed from the marine guards of the vessels named were thoroughly drilled and instructed in advance and rear guard duties, extended order, scouting, and intrenching, practical illustration being given each afternoon of the previous instruction.

Practical instruction in the various modes of attack and defense was given at different times and under varying conditions, the command being divided into attacking and defending forces. This instruction was facilitated and rendered much more beneficial than it would otherwise have been by the diversified topography of the island and the fact that nearly all of the land was available for the work in hand. After each maneuver a discussion was held by the officers as to the various points brought out. This combination of practical work, followed by theoretical discussion, has enabled the officers of the battalion to derive the fullest possible benefit from the exercises and maneuvers.

As showing the excellent physical condition of his command, Captain Magill states that on August 28 his battalion marched across the rolling country to Vineyard Haven and return, a distance of about 21 miles. The start was made at 8 o'clock a. m. and the return trip completed at 5 p. m., with a rest of one hour at Vineyard Haven, and all hands returned from this march in good condition.

On September 1, the marines of the fleet were landed on Block Island for special work in connection with the maneuvers of the fleet, and the effect of the training of the men during the previous landings was manifested by the quiet, intelligent, and expeditious manner in which the camp was established. Other exercises and drills, similar to those above described, were held, and the guards returned to their ships on September 7.

Captain Magill is entitled to much credit for the conscientious and thorough manner in which he conducted the various exercises and maneuvers on shore by the battalion under his command, making the work interesting and at the same time very instructive to all who participated in it.

The camp equipage, etc., used by this battalion is distributed among the ships of the squadron, ready to be issued at any time when the battalion is required to land.

ENLISTED STRENGTH INCREASED.

By the act of Congress approved July 1, 1902, which created the rank of major-general for the present commandant, the enlisted strength of the Marine Corps was increased by the addition of 10 gunnery-sergeants, 40 sergeants, 60 corporals, 10 drummers, 10 trumpeters, and 620 privates, so that the present total authorized enlisted strength is as follows: Five sergeant-majors, 20 quartermaster-sergeants, 1 drum-major, 82 gunnery-sergeants, 60 first-sergeants, 280 sergeants, 540 corporals, 90 drummers, 90 trumpeters, 5,557 privates, 25 boys learning music, 1 leader of the band, 1 second leader of the band, 30 first class musicians, 30 second class musicians, or a grand total of 6,812.

DISTRIBUTION OF FORCE.

The wide range of duty now performed by marines, and the many demands made upon the corps at the present time are indicated by the following enumeration of stations at which marine posts are established, and the ships on which there are marine guards:

In the United States.—Annapolis, Md.; Brooklyn, N. Y.; League Island, Pa.; Naval Home, Philadelphia, Pa.; Washington, D. C. (two posts); Newport, R. I.; Pensacola, Fla.; Portsmouth, N. H.; San Francisco, Cal.; New Orleans, La.; Boston, Mass.; Dry Tortugas, Fla.; Iona Island, N. Y.; Mare Island, Cal.; Norfolk, Va.; Port Royal, S. C.; Puget Sound, Wash.; Sitka, Alaska.

In the West Indies.—San Juan, P. R.; Culebra, Virgin Islands.

In the Philippines.—Cavite, Parangue, Rosario, Las Pinas, Subig, Isabela, Malabrigo light, Balabac light, Bacoar, Novaleta, Cavite Viejo, Olongapo, Morong, Pollok, San Bernardino light.

Japan.—Naval hospital, Yokohama.

List of ships.—Buffalo, Chicago, Dolphin, Helena, Indiana, Kearsarge, Marietta, Manila, Monocacy, Mohican, Nashville, New York, Oregon, Prairie, Rainbow, San Francisco, Southery, Wilmington, Yorktown, Alabama, Annapolis, Boston, Columbia, Independence, Nipsic, Chesapeake, Dixie, General Alava, Illinois, Iowa, Kentucky, Machias, Massachusetts, Michigan, Monadnock, Montgomery, New Orleans, Olympia, Panther, Princeton, Ranger, Solace, Vicksburg, Wisconsin, Abarenda, Albany, Atlanta, Brooklyn, Franklin, Minneapolis, Wabash, Lancaster.

The following table, taken from the report of the adjutant and inspector of the Marine Corps, shows the number of men who have been detailed for foreign service, the number who have returned, and the number now serving on shore outside of the continental limits of the United States, and on board ships of the Navy:

	Officers.	Enlisted men.
Number of men detailed for service on shore outside of the continental limits of the United States September 30, 1901	94	2, 329
Number detailed since that time for such service:		
To the Philippine Islands	27	472
To Guam, Ladrone Islands	1	25
To Culebra, Virgin Islands	5	140
To Panama, United States of Colombia	16	325
Making a total of officers and enlisted men transferred for duty on shore outside the United States	143	3, 291
Of this number there have been returned to the United States from the service mentioned, including deserters and men discharged	50	1, 455
Died	5	100
Now actually serving as above stated	88	1, 736
Total number serving on shore outside the United States	88	1, 736
Total number serving within the United States	78	2, 335
Total number on board ships in commission	35	1, 747
Grand total	201	5, 818

VACANCIES FOR OFFICERS.

At the time this report is written there are two vacancies in the list of second lieutenants in the corps, and as soon as the existing vacancies in the higher ranks in the corps are filled, this number will be increased to eleven.

Only one naval cadet has been appointed into the Marine Corps this year, and unless there is a decided increase in the number of officers obtained from this source and from the appointment of meritorious noncommissioned officers of the corps as second lieutenants, the exist-

ing vacancies will not be filled during the coming year. As the full number of officers allowed the Marine Corps by law is most urgently needed, it is hoped that the bill introduced at the last session of Congress, permitting further appointments from civil life until the authorized number of officers shall have been obtained, will become a law. It is recommended that this matter be brought to the attention of Congress by the Department.

There are a number of vacancies existing to which promotions can not be made immediately, owing to the Department's decision in the case of Second Lieut. A. J. O'Leary, U. S. M. C., that section 1219 of the Revised Statutes applies to the Marine Corps, and that, therefore, in fixing the relative rank between officers of the same grade and date of appointment and commission, the time which each may have actually served as a commissioned officer of the United States, whether continuously or at different periods, shall be taken into account. Until the relative position of the different officers to whom this law applies has been definitely fixed, it will not be possible to determine which officers are at the head of the list in the different ranks, and further promotion will therefore have to be suspended until this can be ascertained.

MARINE BAND.

The Marine Band has continued in an excellent state of efficiency under the direction of Leader William H. Santelmann, and the usual outdoor concerts have been given during the year in the grounds of the White House, at the Capitol, and at the Marine Barracks. These concerts have been greatly appreciated by the public, as heretofore.

INCREASE OF THE CORPS.

A bill was introduced in the House of Representatives by Hon. Thomas S. Butler, Member of Congress, at the last session of Congress to increase the efficiency of the Marine Corps. This bill, known as H. R. 14740, provided for the following additional officers and enlisted men for the corps: One brigadier-general, 1 colonel, 1 lieutenant-colonel, 5 majors, 12 captains, 15 first lieutenants, 12 second lieutenants, 2 assistant adjutants and inspectors with the rank of major, 4 assistant quartermasters and 2 assistant paymasters with the rank of captain, 1 sergeant-major, 20 quartermaster-sergeants, 3 gunnery-sergeants, 12 first sergeants, 60 sergeants, 96 corporals, 12 drummers, 12 trumpeters, and 1,056 privates.

The bill also provides that the Commandant of the Marine Corps shall have the rank, pay, and allowances of a major-general.

The bill provides that vacancies in the rank of second lieutenant shall be filled, as far as practicable, from graduates of the United States Naval Academy each year on completing the academic course; then from meritorious noncommissioned officers of the corps, and from civil life, subject to examination as heretofore provided by law in similar cases.

This bill provides that the sergeant-majors and the first ten quartermaster-sergeants shall be known as staff sergeant-majors and staff quartermaster-sergeants, respectively; that such staff sergeant-majors and staff quartermaster-sergeants shall receive the same pay and allowances as warrant officers of the Navy when at sea, and after ten years

from date of warrant the staff sergeant-majors and staff quartermaster-sergeants shall be commissioned to rank with but after second lieutenants and shall have the same pay and allowances as second lieutenants of the Marine Corps; also that the law pertaining to the retirement of commissioned officers of the Marine Corps is made applicable to staff sergeant-majors and staff quartermaster-sergeants.

This bill also provides that the law for the retirement with the next higher rank of naval officers who served creditably during the war of the rebellion shall be deemed to apply to officers of the Marine Corps now on the active list who served creditably during said war, provided that they shall have seen not less than forty years' continuous service in the Marine Corps or shall be compulsorily retired on account of age, wounds, or physical disability contracted in the line of duty.

Provision is also made in this bill for the establishment on the Government reservation at Annapolis, Md., of a professional school for the instruction and training of officers and enlisted men of the Marine Corps.

Another paragraph of the bill benefiting enlisted men of the corps is that providing that marines assigned to duty as cooks on shore shall, while so serving, have the same rank and pay as enlisted men assigned to such duty in the Army, and those assigned to duty as crew messmen on board ships of the Navy shall have, while so assigned, the same allowances per month as messmen in the Navy.

Without entering at length into a discussion of the provisions of the above-mentioned bill, I beg to state that it conforms with my ideas of the immediate necessities of the corps in the way of legislation. The need for more officers and men in the corps to properly perform the many varied and increasing demands constantly made upon it is most urgent. Without the comparatively small increase contemplated by the bill it will be difficult, if not impossible, for the corps to meet the demands which will certainly be made upon it. Those provisions of the bill relating to enlisted men will tend to raise the standard of men enlisting in the corps as a whole, and will offer inducements for continuous service to many trained and valuable soldiers who otherwise would not reenlist. No argument is needed to show that it is to the interest of the Government, even at an increased expense, to retain in the service seasoned, thoroughly instructed, and trained men, by such inducements as those incorporated in the bill in question rather than to be continually enlisting and training recruits who leave the service upon the completion of their first enlistment, just as they are becoming most valuable to the Government.

Concerning the provision of the bill which provides that marine officers who served creditably during the war of the rebellion shall be retired with the next higher rank, it seems no more than just that officers of the Marine Corps should be given the same privilege in this respect as that conferred upon their comrades in the Navy, and the enactment of this provision into law would, it is submitted, be a well-deserved reward for the few old officers in the corps to whom it would apply.

The allowance of extra pay to marines detailed as cooks on shore and to marines assigned to duty as crew messmen on board ships of the Navy will merely place marines performing such duty on the same footing as their comrades in the Army and Navy, respectively, who perform like service, thus removing the present discrimination against

the marines in this particular, which was undoubtedly not intended by Congress.

I can not too strongly urge the Department to favor the enactment into law of all the provisions of the above-mentioned bill.

MARINE OFFICERS AT NAVAL WAR COLLEGE.

With the exception of the time during which he was in command of the marines at Camp Roosevelt, Culebra, Maj. H. C. Haines, U. S. M. C., has continued on duty as a member of the permanent staff at the Naval War College at Newport, R. I., as lecturer and instructor in military matters and military adviser in questions connected with land operations.

On May 31, 1902, Capt. L. C. Lucas, U. S. M. C., was ordered to the school to attend the course, and it is my intention to detail him as military instructor at the college, to take the place of Major Haines when that officer is detached. Owing to the great demand for officers at posts in this country and in the Philippines and to command guards on board ships, it has been impossible to detail any more officers for special instruction at the War College, but it is hoped that arrangements to this end may be effected in the future, as in my opinion the course at the college is of great value to those who attend.

AID TO COMMANDANT.

First Lieut. H. C. Snyder, U. S. M. C., aid-de-camp to the Brigadier-General, Commandant, was detached from this duty January 9, 1902, and ordered to join the special detachment for duty at Culebra.

Capt. Henry Leonard, U. S. M. C., was appointed aid-de-camp to the Major-General, Commandant, on September 4, 1902.

REPORTS OF STAFF OFFICERS.

I append the reports of the adjutant and inspector, quartermaster, and assistant quartermasters of the corps and request that they be printed in connection with my report. These reports are marked "C," "G," "I," "J," "K," and "L," respectively.

APPOINTMENTS.

Brigadier-General, Commandant, Charles Heywood, to be Major-General, Commandant, July 1, 1902.

First Lieut. Edwin A. Jones, to be captain and assistant quartermaster, United States Marine Corps, January 13, 1902.

FROM NAVAL ACADEMY.

Naval Cadet Ward K. Wortman, to be second lieutenant, United States Marine Corps, July 1, 1902.

FROM MARINE CORPS.

In pursuance of the provisions of the act of Congress approved March 3, 1899, providing for the appointment of meritorious non-commissioned officers of the Marine Corps to the rank of second lieu-

tenant in the corps, the following appointments have been made during the past year:

Sergt. Walter E. Noa, December 6, 1901.
 Corpl. Earl H. Ellis, December 6, 1901.
 Sergt. John A. Hughes, December 6, 1901.
 Corpl. Arthur McAllister, December 6, 1901.
 Corpl. Alonzo C. Baker, February 5, 1902.
 Sergt. Cleyburn McCauley, August 27, 1902.
 Sergt. Harvey C. Egan, August 27, 1902.
 Sergt. Thomas C. Turner, August 27, 1902.

MEDALS OF HONOR.

Since my last report the following-named enlisted men of the Marine Corps have been awarded medals of honor and gratuities of \$100 each by the Secretary of the Navy, under the provisions of the act of Congress approved March 3, 1901:

Corpl. Edwin N. Appleton, Private James Burns, and Private Henry W. Heisch, for crossing the river at Tientsin, China, June 20, 1900, under a heavy fire, and destroying buildings occupied by the enemy.

Private Louis F. Thies, for fearlessly exposing his own life to danger for the saving of others on the occasion of the fire on board the U. S. S. *Petrel*, March 31, 1901.

COMMENDATORY LETTERS.

On March 22, 1902, commendatory letters were sent by the Navy Department to Sergts. Alexander J. Foley and Percy S. Burch, Corpl. Henry E. Swift, and Private William Hanrahan, U. S. M. C., for fearlessly exposing their lives to danger in rescuing from the battlefield at Tientsin, China, Maj. James Regan, Ninth United States Infantry, who was seriously wounded.

OFFICERS RETIRED.

Capt. Robert P. Faunt Le Roy, December 12, 1901.

OFFICERS RESIGNED.

Second Lieut. William D. A. Junkin, March 14, 1902; Second Lieut. Yandell Foote, April 28, 1902.

OFFICERS DIED.

Maj. J. M. T. Young (retired), August 1, 1902; First Lieut. Olof H. Rask, May 29, 1902.

OFFICER DISMISSED.

Capt. Bertram S. Neumann, March 17, 1902.

ENLISTED FORCE (ENLISTMENTS, DEATHS, RETIREMENTS, ETC.).

Enlistments	1,790
Reenlistments:	
From Marine Corps	157
From Army	129
	286
Total	2,076
Discharged, died, deserted, and retired	1,986

In accordance with the Department's instructions of July 1, 1902, the annual estimates for the support of the corps for the fiscal year

ending June 30, 1904, were forwarded to the Department on September 20, 1902.

Triplicate copies of the quartermaster's and paymaster's estimates are appended to my report, marked "O" and "Q," respectively.

The adjutant and inspector of the corps has made inspections in accordance with article 977 (3), Navy Regulations, 1900, and reports the discipline and efficiency of the men as being most satisfactory.

The quartermaster of the corps has also inspected the marine corps buildings at most of the important posts during the year, and reports their general condition to be excellent.

Good-conduct medals have been awarded during the year to such enlisted men of the corps as were recommended by the board on good-conduct medals under the provisions of article 922, Navy Regulations, 1900.

I append hereto an abstract and schedule of proposals received for furnishing rations, fuel, and other annual supplies for the Marine Corps during the present fiscal year, and it is requested that these be made a part of my report. They are marked "R" in the appendix.

ARMY COURTESIES.

As heretofore, the Marine Corps is under obligations to the army authorities for their courtesy in obliging the corps with transportation for its officers and enlisted men, and stores, on army transports, and in furnishing the corps with certain rations and other supplies on application.

All the regular appropriations and the several allotments made to the Marine Corps from the emergency fund of the Navy Department have been carefully and judiciously expended, all purchases being substantiated by vouchers.

It gives me pleasure to be able to state that the Marine Corps has met promptly and satisfactorily the many and varied demands made upon it during the year, and that it has maintained its reputation for constant readiness and high efficiency.

Very respectfully,

CHARLES HEYWOOD,
Major-General, Commandant.

The SECRETARY OF THE NAVY.

* * * * *

M.

HEADQUARTERS U. S. MARINE CORPS,
Washington, D. C., September 20, 1902.

SIR: 1. In accordance with the Department's instructions of July 1, 1902, I have the honor to submit for its approval the annual estimates for the support of the Marine Corps for the fiscal year ending June 30, 1904.

2. The paymaster and the quartermaster transmit letters with their estimates, explaining them in detail, and stating the reasons for the increase or decrease in the various subheads of the appropriations, and these letters are inclosed for the information of the Department.

3. The paymaster's estimates show an increase of \$2,000 in the pay of the Commandant of the Corps, \$1,000 in the pay of the retired enlisted men, \$6,000 for undrawn clothing, \$1,542.52 increase in pay of civil force, and a decrease of \$2,625, the pay of one retired major, deceased, making a net increase of \$7,917.52.

4. The quartermaster's estimates show a net increase over the appropriations for the current fiscal year of \$23,800. The details of and necessity for this increase are explained as follows:

5. "Provisions, Marine Corps." No change under this head is recommended, except a slight change in the phraseology, the necessity for which is explained in detail in the accompanying letter of the quartermaster.

6. "Clothing, Marine Corps." No change is recommended, the sum now appropriated being deemed sufficient, with economy in expenditures, provided the allowances of the men are not increased.

7. "Fuel, Marine Corps." An increase of \$10,000 is recommended, making the total appropriation \$45,000. This increase is necessitated by the increased amount required under this appropriation in the Philippines, and to provide the necessary fuel for the new marine barracks now nearing completion at the Naval Academy, Annapolis, Md., and the marine barracks which are to be built at the naval training station, San Francisco, Cal., where there are no barracks at present. This increase also takes into consideration the fact that under the rulings of the accounting officers of the Treasury the cost of maintaining electric lights at posts of the Marine Corps is chargeable to this appropriation. The items from which this increase is formulated are: Additional fuel expense in the Philippines, \$3,500; fuel at Annapolis and San Francisco, \$4,000, and the cost of maintaining electric lights at Annapolis, Norfolk, and San Francisco, \$2,500, aggregating the increase for which the estimate is made.

8. "Military Stores, Marine Corps." An increase of \$50,000 is recommended under this head. The necessity for the increase is explained in detail in the accompanying letter from the quartermaster. Until recently it has been the practice of the Department not infrequently to issue military stores to the Marine Corps without charge. This practice having caused embarrassment to the Bureau of Ordnance, Congress two years ago, upon request, provided a special appropriation of \$100,000 for the Bureau of Ordnance for the procurement of arms and equipments for the Marine Corps, half of which was expended in equipping the Marine Corps with the new navy rifle and the balance in the purchase of ammunition, field equipment, etc., for the corps. This special appropriation does not appear in the current naval appropriation act, and the sum now available for the purchase of military stores for the corps is, in consequence, totally insufficient to purchase articles of this kind, which are absolutely necessary to the efficiency of the enlisted force. Twenty-five thousand dollars of the increase requested is to provide for the purchase of such articles. The other \$25,000 of the increase was intended to provide for the construction, equipment, and maintenance of post exchange, school, library, and amusement rooms and gymnasiums at two or three posts of the corps. Such rooms are considered a modern necessity for comfort of the men, and it is thought will tend to decrease the number of desertions very materially. The current army appropriation act carries an item of \$500,000 for the same purpose for the Army, and it is hoped that the very modest sum above mentioned will be allowed for the Marine Corps, in order that amusement rooms, gymnasiums, etc., may be established at two or three posts, with the view of asking for a like sum annually until all the posts of the corps are provided with such facilities.

9. "Transportation and Recruiting." No change in the appropriation under this head is advised, as it is thought that with careful economy in the expenditures the amount now provided will be sufficient.

10. "Repair of Barracks, Marine Corps." An increase of \$15,500 is recommended under this head. Fifteen thousand dollars of this is to provide for repairs to barracks occupied by marines in the Philippines and will be sufficient to make the structures now occupied safe and sanitary for the present, until the adoption of a policy looking

to the construction of suitable permanent barracks and quarters at the various Philippine stations. An increase of \$500 in this appropriation is also recommended to provide needed additional room in the building occupied as a manufacturing and storage depot by the assistant quartermaster, U. S. Marine Corps, in Philadelphia. The text of the appropriation under this head has been slightly modified so that if necessary money could be expended for repairs on the barracks at Algiers, La., and San Francisco, Cal., as the new barracks at these stations would have been completed before the close of the current fiscal year.

11. "Forage, Marine Corps:" Under this head an increase of \$5,000 is recommended, owing to the fact that the use of larger number of horses and mules in the Philippines has been found necessary as the result of experience in field and garrison service. As stated by the quartermaster, it will also be necessary to have animals to transport men and supplies at the new barracks at Annapolis, Md., Norfolk, Va., and San Francisco, Cal.

12. "Hire of Quarters, Marine Corps:" An increase of \$5,000 is recommended under this head, the Auditor for the Navy Department having decided that officers serving with troops at Guam and other stations where there are no public quarters available are entitled to hire of quarters. The Comptroller has decided that officers on recruiting duty are entitled to hire of quarters, which also necessitates a slight increase in the appropriation.

13. "Contingent, Marine Corps:" An increase of \$16,300 is estimated for under this head. This increase is to provide for the purchase of numerous necessary articles for the marine posts in the Philippines, such as plumbing fixtures, shower baths for the men, pumps, furniture for officers' and men's quarters, for the grading and improvement of grounds, purchase and care of public horses, etc., and for the purchase of tents and camp equipage for issue to the marine guards of vessels in commission, it having been found necessary to provide the guards of ships with such articles in order that they may be fully prepared at all times for landing as shore parties.

14. At Norfolk, Va., the construction of commanding officers' and junior officers' quarters is recommended. This item was included in the Marine Corps estimates submitted last year, and the chairman of the House Committee on Naval Affairs, while approving the estimate then submitted for a new marine barracks at Norfolk, which is provided for in the current naval appropriation act, suggested that the item for commanding officer's and junior officers' quarters at Norfolk be withheld at that time and submitted this year. The intention is to erect commanding officer's quarters costing \$12,000 and three junior officers' quarters costing \$10,000 each, the houses to be of brick and two stories in height.

15. At the naval training station, San Francisco, Cal., it is recommended that \$15,000 be appropriated for the construction of commanding officer's and junior officers' quarters. This item was included in last year's estimates, but was stricken out at the suggestion of the chairman of the House Committee on Naval Affairs, to be inserted this year. The quarters are urgently needed, as a marine barracks is now in course of construction at the station named and will probably be ready for occupancy in April or May next. At present there are no available quarters there for officers, and they are required to live in tents. The estimate submitted contemplates the erection of frame houses two stories in height similar to those recently built there for naval officers.

16. At the marine barracks, navy-yard, Mare Island, Cal., a board of survey has recently recommended the discontinuance of the present system of heating the barracks by stoves, as being dangerous on account of fire, injurious to the health of enlisted men, and expensive to maintain. The civil engineer of the station has recommended the change from open stoves to steam heat; and as there is no doubt that the installation of steam heat will be beneficial to the health of enlisted men, and will remove a constant source of danger from fire, and that the expense of maintenance will be less, the annual saving being estimated at from \$800 to \$1,000, it is recommended that provision be made for the construction of an outhouse and the installation of a steam heating plant, and estimates are submitted accordingly.

17. It is the endeavor of the Major-General Commandant to administer the affairs of the Marine Corps as economically as possible, and it is hoped that the Department will see its way clear to approve the above estimates as submitted.

Very respectfully,

GEO. C. REID,

Colonel, Adjutant and Inspector, and Acting Commandant.

THE SECRETARY OF THE NAVY.

N.

HEADQUARTERS U. S. MARINE CORPS,
QUARTERMASTER'S OFFICE,
Washington, D. C., September 19, 1902.

SIR: 1. I have the honor to transmit herewith estimates for the quartermaster's department, U. S. Marine Corps, for the fiscal year ending June 30, 1904.

"Provisions, Marine Corps:" No change under this head is recommended. After the words "transportation of provisions" the following words have been inserted in the text of the appropriation: "and the employment of necessary labor connected therewith." Such insertion is made in order that the technical point may not be raised by the accounting officers of the Treasury that the employment of services in connection with the transportation of provisions is not a proper charge against the appropriation, Provisions, Marine Corps. Necessarily, in the transportation of provisions, particularly in the Philippine Islands, where stations are widely separated, the employment of labor is an incidental expense, and it seems proper that the same should be charged to this appropriation. The suggested modification of the wording of the appropriation will not require an increase in the amount of the appropriation. Another slight verbal change has been made in the text of the appropriation, as follows: The word "thereof," after the words "and for ice for preservation," has been omitted, and after "and for ice for preservation" the words "of rations" have been inserted.

"Clothing, Marine Corps:" No change in the amount provided for the current fiscal year is recommended. Such sum is sufficient for the requirements under usual conditions of service, provided the allowances for the men are not increased.

"Fuel, Marine Corps:" The amount of the appropriation for the current fiscal year is \$35,000. An increase of \$10,000, making the appropriation \$45,000, is recommended. The expenses in the Philippines under this head have, with the strictest economy, been about \$3,500 greater during the last year than was anticipated, and such expenses can not be reduced without injury to the health and comfort of the enlisted men. New barracks at Annapolis and San Francisco, where there are no barracks at present, will soon be completed. To supply fuel therefor will involve an expense of about \$4,000 annually. Under the rulings of the accounting officers of the Treasury the cost of maintaining electric lights at posts of the Marine Corps is chargeable to this appropriation. The annual expense for the average command for lights is about \$850 per year, and to supply the new barracks at Annapolis, undergoing completion, and the new barracks at Norfolk and San Francisco, soon to be constructed, will cost about \$2,500 yearly. These three buildings will be ready for occupancy before the end of the current fiscal year. The items of \$3,500 for additional expenses in the Philippines and of \$4,000 at Annapolis and San Francisco for fuel will amount to \$7,500, and the cost of maintaining electric lights at Annapolis, Norfolk, and San Francisco, \$2,500, or a total of \$10,000, the sum recommended as an addition to the current appropriation.

"Military Stores, Marine Corps:" An increase of \$50,000 is recommended under this head. Until recently it has been the practice of the Navy Department not infrequently to issue military stores to the Marine Corps without charge. The Bureau of Ordnance, Navy Department, was embarrassed by such gratuitous issues, and upon official representation of the fact and the necessities of the case two years ago Congress provided a special appropriation for the Bureau of Ordnance of \$100,000 for the procurement of arms and equipment for the Marine Corps. About \$50,000 of such appropriation was allotted to the Marine Corps for the purchase of the new army rifle, caliber .30. The remaining \$50,000 of the appropriation was intended and expended for the purchase of ammunition, field equipment, and men's accouterments. This special appropriation does not appear in the current naval appropriation act, and the sum now available for the procurement of all military stores for the Marine Corps is only \$50,297. Such sum is insufficient for the needs of the corps under this head, and this department will be unable to purchase and issue the number of articles procurable under the head of military stores for the requirements of the service. All articles named under such head are necessary to the efficiency of the enlisted force, and it is important that the number of these articles needed for field and garrison duty be available. Therefore it is recommended that the appropriation be increased by \$25,000 for military equipment, accouterments, tent, field implements, maintenance of target ranges, purchase of ammunition, etc., itemized under the head of military stores.

By reference to the appropriation act for the Army for the current fiscal year it will be seen that Congress has provided the sum of \$500,000 for the construction, equipment, and maintenance at military posts of post exchange, school, library, and

amusement rooms and gymnasium. The establishment and maintenance of such rooms and gymnasium are highly important to the comfort and contentment of the enlisted force. At present only a few posts of the Marine Corps are provided with buildings suitable for such object. On the contrary, rooms in the barracks which are required for other purposes are assigned for use as post exchange, school, library, and amusement rooms and gymnasium. This allotment of such rooms injuriously affects the comfort of the men, as it results in crowding other portions of barracks. There appears to be no doubt as to the advisability or necessity of providing rooms for the men where they can enjoy comfort and some retirement outside sleeping quarters. In my opinion, the construction, equipment, and maintenance of post exchange, school, library, and amusement rooms and gymnasium will tend materially to decrease desertion, and the result would be increased comfort, convenience, and consequently contentment of the men. For the purpose indicated an item of \$25,000 has been inserted under the head of military stores. This sum is a modest one, but the purpose is to expend the appropriation, if provided by Congress, so that two or three posts may be equipped annually and not establish such rooms for men at all posts at one time. This latter arrangement is preferable for many reasons, but would involve a greater expense than it is deemed advisable to recommend at this time.

"Transportation and Recruiting, Marine Corps:" No change in the appropriation under this head is advised. Economy in the expenditures will be necessary, however, to guard against a deficiency.

Repairs of Barracks, Marine Corps: An increase of \$15,000 is recommended under this head. Such recommendation is based upon the result of a personal inspection by me in March last of the 14 posts at which marines are stationed in the Philippine Islands. The buildings which the marines are occupying in that quarter are old and in need of improvements and repairs. They are buildings which were used by the Spanish marines. Some of these were damaged by the fire of shot and shell from United States vessels, and others were injured by Spanish marines before they left the buildings. The roofs of nearly all the buildings now used by the United States marines are of iron. They are badly pitted by weather, and the men are required to sling canvas under the roof that the rain may be carried off. For the protection of the health of the men it is important that many of the floors of the buildings should be renewed. In some cases the floors are badly worn, and in a few cases decayed and unsafe and unsanitary. Some painting, whitewashing, and other improvements are urgently needed. It is believed that with the suggested increase in the appropriation the buildings can be put in fairly good condition, pending the adoption of a programme or policy looking to the construction of permanent, more suitable structures for the men. Provision for the increase here recommended has been earnestly advised by Capt. C. S. Radford, quartermaster of the marine brigade in the Philippines.

The text of the appropriation has been modified by the insertion of "Algiers, La.," and "San Francisco, Cal.," as new barracks at these stations will have been completed before the close of the current fiscal year, and the omission of the words would, under the decision of the Comptroller of the Treasury, make it impossible to expend any sum of money for repairs at such stations.

For rent of buildings used for manufacture of clothing, storing of supplies, and office of assistant quartermaster, Philadelphia, Pa., an increase of \$500 in the appropriation is recommended. In the building referred to one large room is now occupied by a telegraph company. This room is necessary for an office room for the use of the assistant quartermaster, and it is advisable that no private company should have an office located in the building, which is used for public purposes. The owner of the building is willing to lease this large room to the Marine Corps for \$500 annually, and its acquisition for that purpose is required.

Forage, Marine Corps: Under this head an increase of \$5,000 in the appropriation is recommended. Such increase is recommended owing to the fact that the use of a larger number of horses and mules in the Philippines has been found necessary as a result of experience in field and garrison service. It will also be necessary to have animals for transporting men and supplies at the new barracks at Annapolis, Md., Norfolk, Va., and San Francisco, Cal.

Hire of Quarters, Marine Corps: An increase of \$5,000 is recommended under this head, the Auditor for the Navy Department having decided that officers serving with troops at Guam and other stations where there are no public quarters available are entitled to hire of quarters. Another reason for this light increase in the appropriation is that the Comptroller of the Treasury has decided that officers serving at recruiting offices are entitled to hire of quarters.

Contingent, Marine Corps: As the result of my personal inspection last March of all the posts of the Marine Corps in the Philippines, and considering the conditions and requirements there, I have to recommend an increase of \$16,300 under this head.

Such increase is needed for the various items appearing under the head of contingent in the annual appropriation acts. I found upon my inspection that none of the posts in the Philippines was supplied with a sufficient number of many of the important articles procurable out of this fund and that an increase in the allowances to the posts in that quarter is necessary to the efficiency of the enlisted force serving in the islands. Chief among the requirements are improvements and additions to sewers and plumbing fixtures, particularly an increase in the number of baths, showers, and water-closets for enlisted men, grading and improvement of grounds, the purchase and repair of furniture for officers' and men's quarters, the procurement and care of public horses, the purchase and repair of pumps used in connection with the water supply, etc. The marine posts in the Philippines are seriously deficient in these items, and additions and improvements of the kind are urgent. Twelve thousand dollars will be needed during the next fiscal year for such object.

Recently it has been determined necessary to issue to vessels in commission of the several fleets and squadrons tents and camp equipage and implements to be used in the event of the marine guards of such vessels landing as shore parties. While the expense under this head will be small, it will be somewhat greater than can be spared from the regular appropriation. With an addition of \$4,300 it will be possible to carry out the new arrangement indicated without embarrassing the regular appropriation.

An increase, therefore, of \$12,000 for contingent expenses in the Philippines, and \$4,300 for supplying seagoing vessels with the equipment referred to, make a total increase of \$16,300.

Public Works, Marine Corps: Under this head it is recommended that appropriations be made for commanding and junior officers' quarters, navy-yard, Norfolk, Va., commanding officer's and junior officers' quarters, naval training station, San Francisco, Cal., a power house and steam heating plant, marine barracks, and officers' quarters, navy-yard, Mare Island, Cal.

In the current naval appropriation act provision is made for the construction and completion of one marine barracks at the navy-yard, Norfolk, Va., but no provision for officers' quarters appears in the act, although in the estimates for the current fiscal year the item for officers' quarters was inserted. The Major-General Commandant will doubtless recollect the fact that on the occasion when the estimates of the Marine Corps were explained to the House Committee on Naval Affairs the chairman of such committee, Hon. G. E. Foss, suggested that the item for officers' quarters be omitted from the current appropriation act, but be incorporated in the estimates for the next fiscal year. Accordingly, such item is inserted in the present estimates, the sum recommended for the object being \$42,000. With such sum a commanding officer's quarters costing \$12,000 and three junior officers' quarters costing \$10,000 each can be constructed, the buildings to be of brick, two stories high.

An item of \$16,000 has been placed in the estimates for commanding officer's and junior officers' quarters, naval station, San Francisco, Cal. An appropriation for such object was recommended in the estimates of this office for the current fiscal year. At the suggestion of the chairman of the House Committee on Naval Affairs the item was stricken from such estimates, the same item to be inserted in the estimates for the next fiscal year. A marine barracks is in course of construction at San Francisco, and will be ready for occupancy, it is expected, in April or May next. At present there are no available quarters for officers serving at that station, and they are required to live in tents. It seems only necessary to add in this connection that officers should have substantial quarters and that the same should be located near the enlisted men with whom they are serving. With the small sum recommended for this object frame houses two stories in height can be constructed. Such houses would be like those recently built for naval officers.

An item of \$11,000 has been inserted in the estimates for the construction of a power house and installation of a steam-heating plant, marine barracks, and officers' quarters, navy-yard, Mare Island, Cal. Recently a report from a board of survey from that station was received by this office in which the present system of heating by stoves was recommended to be discontinued as being dangerous on account of fire, injurious to the health of the enlisted men, and expensive to maintain. The civil engineer of the station has recommended the change from open stoves to steam heat. There is no doubt that the installation of steam heat will be beneficial to the health of the men, that it will remove a constant danger of fire, and that the expense of maintenance will be considerably less. The commanding officer at such station has estimated that the annual saving on account of fuel, if the change is made from open stoves to steam, will be from \$800 to \$1,000.

Very respectfully,

F. L. DENNY,
Colonel, Quartermaster.

The MAJOR-GENERAL COMMANDANT,
Headquarters U. S. Marine Corps, Washington, D. C.

O.

Comparative statement of estimates and appropriations, 1903-4, Navy Department.

Naval establishment.	Estimates, 1903.	Appropriated, 1903.	Estimates, 1904.	Increase of estimates for 1904 over amount ap- propriated for 1903 for same pur- pose.	Decrease of estimates for 1904 as compared with amount ap- propriated for 1903 for same pur- pose.	New items, 1904.
Provisions	\$396,071.50	\$445,071.50	\$445,071.50			
Clothing	340,000.00	382,000.00	382,000.00			
Fuel	35,000.00	35,000.00	45,000.00	\$10,000.00		
Military stores	40,297.00	50,297.00	100,297.00	50,000.00		
Transportation and re- cruiting	100,000.00	110,000.00	110,000.00			
Repair of barracks	45,000.00	45,000.00	60,000.00	15,000.00		
Philadelphia, Pa., rent	5,000.00	5,500.00	6,000.00	500.00		
Norfolk, Va.: Marine barracks	100,000.00	100,000.00			\$100,000.00	
Commanding and jun- ior officers' quarters	42,000.00		42,000.00			\$42,000.00
Pensacola, Fla., veranda	3,500.00	3,500.00			3,500.00	
Portsmouth, N. H., addi- tion to barracks and quarters	12,000.00					
New York, N. Y., electric lights	3,500.00	3,500.00			3,500.00	
San Francisco, Cal.: Barracks	30,000.00	30,000.00			30,000.00	
Officers' quarters	15,000.00		16,000.00			16,000.00
Portsmouth, N. H., electric lights	1,000.00	1,000.00			1,000.00	
Boston, Mass., sewer	1,500.00	1,500.00			1,500.00	
Sitka, Alaska, officers' quarters	2,500.00	2,500.00			2,500.00	
Culebra, P. R., temporary quarters	5,000.00	5,000.00			5,000.00	
Mare Island, Cal., heating plant			11,000.00			11,000.00
Forage	6,000.00	11,000.00	16,000.00	5,000.00		
Hire of quarters	20,748.00	20,748.00	25,748.00	5,000.00		
Contingent	91,700.00	103,700.00	120,000.00	16,000.00		
Total	1,295,816.50	1,355,316.50	1,379,116.50	101,800.00	147,000.00	69,000.00

F. L. DENNY,
Colonel, Quartermaster, U. S. Marine Corps.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the quartermaster, United States Marine Corps.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of ap- propriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
Provisions: For noncommissioned officers, musicians, and pri- vates serving ashore, for commutation of rations to enlisted men regularly detailed as clerks and mes- sengers, for payment of board and lodging of recruit- ing parties, transportation of provisions and the employment of necessary labor connected there- with, and for ice for preservation of rations, \$445,071.50; and no law shall be construed to entitle marines on shore duty to any rations, or commuta- tion thereof, other than such as now are or may hereafter be allowed to enlisted men in the Army: Provided, however, That when it is impracticable, or the expense is found greater, to supply marines serving on shore duty in the island possessions, and on foreign stations with the army ration, such marines may be allowed the navy ration or commu- tation therefor.		\$445,071.50	\$445,071.50

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, by the quartermaster, United States Marine Corps—Continued.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
Clothing: For noncommissioned officers, musicians, and privates authorized by law, \$382,000.....		\$382,000.00	\$382,000.00
Fuel: For heating barracks and quarters, for ranges and stoves for cooking, fuel for enlisted men, for sales to officers, maintaining electric lights, and for hot-air closets, \$45,000		45,000.00	35,000.00
Military stores: For pay of chief armorer, at \$3 per day; 3 mechanics, at \$2.50 each per day; for purchase of military equipments, such as rifles, revolvers, cartridge boxes, bayonet scabbards, haversacks, blanket bags, knapsacks, canteens, musket slings, swords, drums, trumpets, flags, waist belts, waist plates, cartridge belts, sashes for officer of the day, spare parts for repairing muskets, purchase and repair of tents and field ovens, purchase and repair of instruments for band, purchase of music and musical accessories, purchase and marking of medals for excellence in gunnery and rifle practice, good-conduct badges; for incidental expenses of the schools of application, for the construction, equipment, and maintenance of school, library, and amusement rooms and gymnasium for enlisted men; purchase and repair of signal equipment and stores, for the establishment and maintenance of targets and ranges, and renting ranges, and for procuring, preserving, and handling ammunition and other necessary military supplies, \$100,297.....		100,297.00	50,297.00
Transportation and recruiting: For transportation of troops, including ferriage, and the expense of the recruiting service, \$110,000		110,000.00	110,000.00
Repair of barracks: For repairs and improvements to barracks and quarters at Portsmouth, N. H.; Boston, Mass.; Newport, R. I.; New York, N. Y.; League Island, Pa.; Annapolis, Md.; headquarters and navy-yard, District of Columbia; Norfolk, Va.; Port Royal S. C.; Pensacola, and Dry Tortugas, Fla.; Algiers, La.; Mare Island and San Francisco, Cal.; Bremerton, Wash.; and Sitka, Alaska; for the renting, leasing, improvement, and erection of buildings in Porto Rico, the Philippine Islands, at Guam, and at such other places as the public exigencies require; and for per diem to enlisted men employed under the direction of the Quartermaster's Department on the repair of barracks, quarters, and other public buildings, \$60,000	\$60,000.00		
For rent of building used for manufacture of clothing, storing of supplies, and office of assistant quartermaster, Philadelphia, Pa., \$6,000	6,000.00	66,000.00	50,500.00
Forage: For forage in kind for horses of the Quartermaster's Department and the authorized number of officers' horses, \$16,000		16,000.00	11,000.00
Hire of quarters: For hire of quarters for officers serving with troops where there are no public quarters belonging to the Government, and where there are not sufficient quarters possessed by the United States to accommodate them; for hire of quarters for enlisted men employed as clerks and messengers in the offices of the commandant, adjutant and inspector, paymaster, and quartermaster, and the offices of the assistant adjutant and inspector, the assistant paymaster, and the assistant quartermasters, at \$21 each per month, and for enlisted men employed as messengers in said offices, at \$10 each per month, \$25,748		25,748.00	20,748.00
Contingent: For freight, tolls, cartage, advertising, washing of bed sacks, mattress covers, pillowcases, towels, and sheets, funeral expenses of marines, stationery and other paper, telegraphing, rent of telephones, purchase and repair of typewriters, apprehension of stragglers and deserters, per diem of enlisted men employed on constant labor for a period of not less than ten days, employment of civilian labor, repair of gas and water fixtures, office and barracks furni-			

UNITED STATES MARINE CORPS.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1904, by the quartermaster, United States Marine Corps—Continued.

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
Contingent—Continued.			
ture, camp and garrison equipage and implements, mess utensils for enlisted men, such as bowls, plates, spoons, knives and forks, tin cups, pans and pots, etc.; packing boxes, wrapping paper, oilcloth, crash, rope, twine, quarantine fees, camphor and carbolized paper, carpenters' tools, tools for police purposes, iron safes, purchase and repair of public wagons, purchase and repair of public harness, purchase of public horses, services of veterinary surgeons and medicines for public horses, purchase and repair of hose, purchase and repair of fire extinguishers, purchase of fire hand grenades, purchase and repair of carts, wheelbarrows, and lawn mowers; purchase and repair of cooking stoves, ranges, stoves and furnaces where there are no grates; purchase of ice, towels, soap, combs, and brushes, for offices; postage stamps for foreign postage; purchase of books, newspapers, and periodicals; improving parade grounds, repair of pumps and wharves, laying drain, water, and gas pipes, water, introducing gas, and for gas, gas oil, and introduction and maintenance of electric lights; straw for bedding, mattresses, mattress covers, pillows, sheets; wire bunk bottoms for enlisted men at various posts; furniture for Government quarters and repair of same, and for all emergencies and extraordinary expenses arising at home and abroad, but impossible to anticipate or classify, \$120,000.....		\$120,000.00	\$103,700.00
Total	\$66,000.00	1,310,116.50	1,208,316.50
PUBLIC WORKS.			
For construction and completion of commanding officers' and junior officers' quarters, navy-yard, Norfolk, Va., \$42,000.....	42,000.00		
For construction and completion of commanding officers' and junior officers' quarters, naval training station, San Francisco, Cal., \$16,000.....	16,000.00		
For construction and completion of one power house and the installation of steam heat, marine barracks and officers' quarters, navy-yard, Mare Island, Cal., \$11,000..	11,000.00	69,000.00	

F. L. DENNY,
Colonel, Quartermaster, United States Marine Corps.

P.

HEADQUARTERS U. S. MARINE CORPS,
PAYMASTER'S OFFICE,
Washington, D. C., August 25, 1902.

SIR: 1. Herewith I transmit estimates for pay of the Marine Corps for the fiscal year ending June 30, 1904.

2. These estimates show a net increase over the amount appropriated for the current fiscal year of \$7,917.52, thus explained:

Increase in pay of the commandant	\$2,000.00
Increase in pay of enlisted men, retired.....	1,000.00
Increase for undrawn clothing	6,000.00
Increase of pay in civil forces	1,542.52
	10,542.52
Decrease, 1 major, retired, deceased	2,625.00
Net increase	7,917.52

Very respectfully,

G. C. GOODLOE,
Colonel, Paymaster.

THE MAJOR-GENERAL COMMANDANT, U. S. MARINE CORPS,
Headquarters, Washington, D. C.

Q.

Comparative statement of estimates and appropriations, 1903-4, Navy Department.

Pay Marine Corps.	Estimates, 1903.	Appropriated, 1903.	Estimates, 1904.	Increase of estimates for 1904 over amount appropriated for 1903 for same purpose.	Decrease of estimates for 1904 as compared with amount appropriated for 1903 for same purpose.	New items, 1904.
Increase of pay of Commandant.....						\$2,000.00
Increase of pay of enlisted men, retired.....						1,000.00
Increase of clothing undrawn.....						6,000.00
Increase in pay of civil force.....						1,542.52
Total.....	\$1,831,129.23	\$1,831,129.23	\$1,839,046.75	\$7,917.52		10,542.52
Decrease, one major, retired, deceased.....						2,625.00
Net increase.....						7,917.52

HEADQUARTERS U. S. MARINE CORPS,
OFFICE OF THE PAYMASTER,
Washington, D. C., August 25, 1902.

G. C. GOODLOE,
Colonel, Paymaster U. S. Marine Corps.

Approved September 19, 1902.

GEO. C. REID,
Colonel, Adjutant, and Inspector U. S. Marine Corps,
Acting Commandant.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the paymaster of the U. S. Marine Corps.*

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of ap- propriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
PAY OF MARINE CORPS.			
For pay and allowances prescribed by law of officers on the active list.....	\$418,900.00		\$416,900.00
Pay of officers on the retired list: R. S., p. 272, secs. 1596-1623; acts June 30, 1834, vol. 4, p. 713, secs. 4, 5; Mar. 2, 1847, vol. 9, p. 155, sec. 3; Aug. 5, 1854, vol. 10, p. 586, sec. 1; Feb. 21, 1857, vol. 11, p. 163, sec. 1; July 17, 1862, vol. 12, p. 594, sec. 2; June 30, 1864, vol. 13, p. 144, sec. 1;	55,140.00		57,765.00
3 colonels, 3 lieutenant-colonels, 1 adjutant and inspector, 1 quartermaster, 1 assistant quartermaster, 2 majors, 9 captains, 3 first lieutenants, and 3 second lieutenants....			
For pay of noncommissioned officers, musicians, and privates as prescribed by law; and the number of enlisted men shall be exclusive of those undergoing			

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1904,
by the paymaster of the U. S. Marine Corps—Continued.*

Detailed objects of expenditure, and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for the current fiscal year ending June 30, 1903.
PAY OF MARINE CORPS—continued.			
imprisonment with sentence of dishonorable discharge from the service at expiration of such confinement, and for the expenses of clerks of the U. S. Marine Corps traveling under orders.....	Mar. 3, 1865, vol. 13, p. 487, sec. 1; July 28, 1866, vol. 14, p. 334, sec. 13; Mar. 2, 1867, vol. 14, p. 422, sec. 1; Mar. 2, 1867, vol. 14, p. 517, sec. 7; July 15, 1870, vol. 16, p. 330, sec. 3; Jan. 30, 1885, vol. 23, pp. 293-294, sec. 1; Feb. 14, 1885, vol. 23, p. 305, sec. 1; Navy Regulations, July 18, 1816, acts Feb. 27, 1893, vol. 27, p. 478, sec. 1; Mar. 3, 1897, vol. 29, p. 662, sec. 1; Mar. 3, 1899, vol. 30, p. 1004, secs. 1-26; Mar. 3, 1899, vol. 30, p. 1042, sec. 1; Mar. 3, 1901, vol. 31, p. 1129, sec. 1.	\$1,236,028.00	\$1,236,028.00
Pay and allowance of retired enlisted men: 1 sergeant-major, 1 drum-major, 4 gunnery-sergeants, 8 first-class musicians, 12 first sergeants, 31 sergeants, 5 corporals, 1 drummer, 1 fifer, and 43 privates, and for those who may be retired during the year.....		38,000.00	37,000.00
Undrawn clothing: For payment to discharged soldiers for clothing undrawn..		36,000.00	30,000.00
Mileage: For mileage of officers traveling under orders without troops.		20,000.00	20,000.00
For commutation of quarters to officers on duty without troops, where there are no public quarters.....		8,000.00	8,000.00
PAY OF CIVIL FORCE.			
In the office of the Major-General Commandant: 1 chief clerk.....		1,600.00	
1 clerk.....		1,200.00	
1 messenger.....		840.00	
In the office of the paymaster: 1 chief clerk.....		1,600.00	
1 clerk.....		1,500.00	
1 clerk.....		1,200.00	
In the office of the assistant paymaster: 1 clerk.....		1,400.00	
In the office of the adjutant and inspector: 1 chief clerk.....		1,600.00	
1 clerk.....		1,500.00	
In the office of the assistant adjutant and inspector: 1 clerk.....		1,200.00	
In the office of the quartermaster: 1 chief clerk.....		1,600.00	
1 clerk.....		1,500.00	
1 clerk.....		1,200.00	
1 draftsman.....		1,600.00	
1 clerk.....		1,200.00	
In the office of the assistant quartermaster, Philadelphia, Pa.: 1 clerk.....		1,400.00	
1 messenger, at \$1.75 per diem.....		638.75	
In the office of the assistant quartermaster, Washington, D. C., or San Francisco, Cal.: 1 clerk.....		1,400.00	
2 clerks additional, for duty in the Philippines—1 in pay and 1 in quartermaster department—at \$1,400 each.....		2,800.00	
		26,978.75	25,436.23
The money herein specifically appropriated as pay of the Marine Corps shall be disbursed and accounted for in accordance with existing law as pay of the Marine Corps, and for that purpose shall constitute one fund.....		\$1,839,046.75	1,831,129.23

HEADQUARTERS U. S. MARINE CORPS,
OFFICE OF THE PAYMASTER,
Washington, D. C., August 25, 1902.

G. C. GOODLOE,
Colonel, Paymaster.

R.

Statement of accepted proposals for supplying forage to the Marine Corps under advertisement dated April 17, 1902.

Station.	Contractor.	Station.	Contractor.
Portsmouth, N. H.....	H. R. Paul.	Annapolis, Md.....	J. B. Daish.
Boston, Mass.....	W. H. Belford.	Washington, D. C.....	W. M. Galt & Co.
Newport, R. I.....	Do.	Norfolk, Va.....	W. H. Belford.
Brooklyn, N. Y.....	Do.	Dry Tortugas, Fla.....	
Philadelphia, Pa.....	P. A. Swartz.	Mare Island, Cal.....	T. V. Collins.

Statement of accepted proposals for supplies for the Marine Corps under advertisement dated April 11, 1902.

Contractor.	Amount.	Contractor.	Amount.
F. E. Chesterman.....	\$142. 60	S. D. Childs & Co.....	\$226. 40
Clarke & Co.....	342. 35	Paul J. Devitt.....	1, 787. 50
H. D. Dougherty.....	239. 90	Paul J. Field.....	43. 20
John Galbraith.....	3, 991. 25	Ellis A. Gimbel.....	2, 298. 83
Hanlon & Goodman.....	192. 00	Harrington & Goodman.....	32. 00
Charles W. Hayes.....	1, 438. 00	Hodges & Co.....	99. 60
W. H. Horstman & Co.....	13, 520. 65	Thomas Kelly.....	15, 075. 00
Henry T. Kent.....	61, 830. 00	R. Levick's Sons & Co.....	2, 797. 20
Joseph Loeb.....	555. 43	Manhattan Supply Co.....	3, 989. 48
Meyer & Goetze.....	33, 000. 00	B. Y. Pippey & Co.....	1, 785. 00
Rosenwasser Bros.....	1, 890. 35	W. A. Squire.....	925. 40
Ed H. Taggart.....	13, 135. 46		

Accepted proposals for supplying stationery to the Marine Corps under advertisement dated April 11, 1902.

Contractor.	Amount.	Contractor.	Amount.
R. P. Clarke Co.....	\$87. 30	J. N. Rupp.....	\$348. 35
R. Carter Ballantyne.....	468. 40	R. P. Andrews & Co.....	79. 44
J. C. Parker.....	418. 18	J. Underwood & Co.....	124. 65
Deter & Blackburn.....	694. 74	D. C. Manufacturing Co.....	21. 93
H. C. Davison & Co.....	258. 02	J. A. Dushane & Co.....	385. 69

Accepted proposal received for supplying ice to the Marine Corps under advertisement dated April 17, 1902.

Station.	Contractor.	Per hundred.
Washington, D. C.....	American Ice Company.....	\$0. 35

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